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TABLE II/4

CHANGES IN HOUSE DESIGN, HOUSE CONSTRUCTION AND DOMESTIC AMENITIES IN SIVEPE, 1936–1966
(Comparison between standards reportedly applied on four successive village sites)

Elements	1. *Pusahambo (pre-war)*	2. *Pamba (between war and eruption)*	3. *Old Sivepe (after eruption, until 1965)*	4. *New Sivepe (1966)*
Floor level	Raised on posts	Raised on posts	Raised on posts	Raised on posts
Flooring material	Betelnut, wide gaps	Betelnuts, no gaps	Some betelnut, some blackpalm	Some betelnut, some blackpalm
Windows	No windows	No windows	Small windows	Large windows
No. of rooms	Three	Three	Three	Three
Walling material	Split sago	Split sago	Split sago	'Timber'
Nails: Framing	Nil	Younger people	General	General
Nails: walls	Nil	Nil	Nil	General
Shrubs	Beside houses	Beside houses	Beside houses	To mark paths
Betelnut	Planted	Planted	Planted	Planted
Cocunut	Few	More	More	More
Waste disposal	In gully	In gully	In gully	Rubbish holes
Pigs	Present	Present	Present	Absent
Hen houses	Absent	Absent	Absent	Pens built
Lavatories	Absent	Absent	A few	General
Floor area	'Very Small'	'Bigger'	'Much bigger again' (200 sq. ft.)	'Big' (375 sq. ft.)

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Most of these capital goods enter the village by gift or gift exchange. Some types (e.g. kitchenware and clothes) may pass from one village to another by way of brideprice, but other types of gifts (e.g. radios) are hardly ever made in a ceremonial context, but only to close kinsmen. I am not at all sure whether, in Salisbury's terminology, the latter type should be classified as a luxury or a ceremonial item.

One conclusion emerging from the various studies made in the 1960s is that total village income has risen rapidly among the Orokaiva. The sources vary. it may be due to outside employment of persons still ordinarily resident in the village, to increased cash cropping, to sale of food surpluses or to increased remittances from local men employed away from the village.

4. *History*

The main object of this section is to provide some background for the study of Orokaiva exchange, especially between tribes and between Orokaiva and Europeans.

In physical constitution, Williams considered the Orokaiva to be 'midway between the typical Papuan and the typical Melanesian'. Dupeyrat, who has recently (1965) surveyed the evidence, considers the Orokaiva 'basically of the Papuan Mountain type', but mixed with Polyno-melanesian elements, late-comers in Papua, who spread to the Northern District via Maisina and Manigela. It is certainly true that one notices more Polyno-melanesian features along the coast (e.g. among the Yega) than inland.

In the period just prior to European occupation, the most notable aspect of Orokaiva history that can be reconstructed is pressure from the dense population on the Mount Lamington foothills upon the sparser populations surrounding the mountain on all sides, but especially to the north and east. These sparser populations (to whom Williams gives the common name Sauaha) pressed upon the still sparser populations dwelling in the still less fertile country on their own northern and eastern borders (see Chinnery and Beaver 1916; Williams 1930: 152–4; Monckton 1921: Ch. XXIV; Crocombe and Hogbin 1963: 14–16).

In 1888, in response to Australian pressure, the British government annexed Papua. The first administrator, Sir William McGregor, made many arduous exploratory expeditions while establishing his rule in this vast unknown territory. On one of these expeditions he ascended the Mambare river to its highest navigable point, a few miles above Tamata creek, where he discovered the existence of gold in the sand and shores of the river (Monckton 1921: 78; Murray 1912: 326–8). This was the first discovery of gold in Papua with important commercial prospects, and led to a major movement of prospectors and miners to the Northern District. Relationships with the Papuans were bad from the beginning, and there were numerous killings by both sides. In 1900 150 miners were working on the Yodda river; the Yodda and Gira goldfields together produced 15,000 oz. of gold (Murray 1912: 333). In order to stop the bloodshed, resident magistrates were stationed at Ioma, along the Mambare and at two places on the Kumusi river, which was for some years the access route to the Yodda field.

The early relationships between Orokaiva and Australians may be gleaned

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> When a summons was issued by the village constable, then those magic things were put to work (to save the accused from conviction) . . .
>
> In those days men worked for a while but then stopped shifting the earth. The village constable bound them and they went to court in Kokoda. If the court thought they were lying or if they said 'I don't know,' they were taken away and the governor stopped their work. This is the tale of those men of olden days.

Although the passages quoted here are full of obscurities, the situation in which these speeches were delivered makes them worthy of careful analysis. The councillor, who was born in Torogota, had recently moved to Kongohambo, a neighbouring village built in modern style. Some families had accompanied him, but he wanted Torogota village to be abandoned altogether and the whole population transferred to Kongohambo. In his first speech, he gave reasons with which he hoped to persuade his people. We are thus given a glimpse of the social philosophy of his listeners. Although the latter had no intention of leaving Torogota, they did share the basic sentiments to which the councillor appealed. They agreed communal ownership of land was no longer quite fashionable, the village was getting too old, too much land was lying idle, it was bad for labourers to be unreliable, it was bad to kill wayfarers like dogs. They desired to emulate the feats of their ancestors and they knew this could no longer be done by raiding neighbouring villages. This traditional road to renown is no longer open; obviously, new roads have to be found.

The main burden of the councillor's speech was that his people had not found these new roads to power: *ivo ambupu-ta ahihijera*. (Strong ancestors have reared feeble descendants.) *Ivo* (strength, power) is a basic concept in Orokaiva thought, and is somewhat similar to the Polynesian concept *mana*. It is the quality that enables man to be successful in 'ways with which ordinary technique cannot cope' (Firth 1967: 191). It is transmitted to a man by his father at the time of conception, and is augmented by the fact of success, and particularly by the killing of an animal or an enemy, the eating of meat, or the making of gifts. Bohuka, the ancestor of the councillor's lineage, and his companions, undoubtedly had *ivo* which was augmented by their conquests, but his descendants who inherited this *ivo* stood to lose it unless they themselves achieved something of commensurate importance. The Orokaiva, unlike the Tikopia, do not think of this magical efficacy as being essentially an attribute of chiefs or leaders, though men of influence do have *ivo* to an exceptional degree. In the terms of the theory developed in the present work, *ivo* is always an object of exchange, received from an exchange partner, often in the form of meat, as will be shown in Chapter VII. The ultimate source of *ivo*, however, are *dema* figures such as Totoima and Pekuma who first gave *ivo* to man.

The councillor's second speech is one of several pieces of evidence that lead me to suggest that the Orokaiva regard Jesus Christ as a *dema* figure and a powerful source of *ivo*. A Papuan pastor was the first to put this idea to me when we discussed an Orokaiva dance performed at his Church during the Christmas service. The dancers, dressed in traditional garb and beating drums, filing in a wide circle past the cross erected on the mission station, sang a traditional chant originally performed after a victim had been killed in a cannibal raid. The pastor drew my attention to the similarity between the killing of such

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imbued with the spirit of the donor and (ideally) compelled to behave as though he owed the owner quasi-filial allegiance. This is a magical action of precisely the kind I envisaged in the introduction to this chapter.

Finally, a transfer of land may be maintained indefinitely as long as, in the donor's view, it has 'virtue', i.e. as long as it mediates the kind of relationship the donor desires. But when the relationship breaks up, for one reason or another, the owner desires to have his land returned to him. This is why 'residual rights' on cash cropping land are so awkward. The modern age, the desire for money, the commitment of productive effort outside the range of the security circle all tend to disrupt the relationships envisaged by the lender of land. Meanwhile, modern political, judicial and administrative institutions have taken over many of the functions of the old-time alliances which were bolstered by land gifts.

I have explained in detail why traditionally the Orokaiva considered land to have 'virtue' as a mediating element in their most intimate alliances. In particular it mediates the bonds between husband and wife, spirits and living, paternal, junior–senior agnates and maternal family, and between an indefinite category of close friends.

Land may also act as a mediating element in a negative exchange between a sorcerer and a person who has aroused the anger of that sorcerer, as happens when the former blights the crops of the latter by placing a curse on the land. In many situations of this sort, events which we would class as metaphysical, physiological or climatological are explained as arising out of social exchange. Such beliefs tend to increase the importance attached to the maintenance of satisfactory social exchange relations because the averting of misfortune in the metaphysical, physiological and climatological realms is made conditional upon successful social relations.

The prosperity and opulence of the land thus becomes a measure of its owner's moral and spiritual wellbeing and the amity with which he is regarded by his fellow men. A good man is a good gardener: a good gardener is a good man. This equation is not arrived at by the Orokaiva with the aid of some Frazerian notion of contagion, but on the assumption that the good man has good exchange relations: therefore nobody would wish to harm his garden; therefore the garden must necessarily be in perfect condition. In this as in many other instances exchange is used as the *explicans* of what might well be explained in many other ways. It is because of such gratuitous use of exchange as *explicans* that I am inclined to regard it as a key concept in Orokaiva philosophy.

REFERENCES

1. I am using the term 'transcendental' in the sense of Schutz 1967 who demonstrates the transcendental expenses arising in social relationships.
2. For the location of Garombi, see Fig. 10.
3. These growers held certificates of title issued by the Higaturu Local Government Council, but these certificates have no legal force. I shall discuss in the next section of this chapter the pressures by which the Orokaiva are gradually being induced to establish sole titles.
4. Money as the means of salvation is a theme of many millennial cults, as is argued in detail by Burridge 1969 (*passim*, but see especially pp. 41–6).

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583 528 616 Forms of dual organisation between pairs of reciprocating groups have always been of limited scope as the groups tended to reside apart from each other, and each group tended to have marriage exchange relations with several other groups at the same time. Even the short genealogies of Sivepe show evidence that the families of this village have been participating in no less than twenty-five reciprocating pairs of groups, the exchange sometimes consisting of no more [177] than one recorded exchange of women between two villages. Interestingly enough, it was Australian pressure towards village consolidation that emphasised [361] the tendency to dual organisation.

361 178 614 583 First of all, co-residence tends to increase the number of marriages between local clan groups which are thus thrown together. Usually, such local clan groups are already reciprocating pairs, but when co-residence is established, they begin to reciprocate at a greater rate. For instance, the Seho and Jegase local clan groups in Sivepe, comprising together sixteen households, are linked by seven current Seho-Jegase marriages. This was sufficient to define the seven Seho households and the nine Jegase households as standing in an affinal relation to one another.

614 621 166 616 In such a village the other households tend to be classified as adhering to one of the two dominant local clan groups. A few years before I came to Sivepe, Rimoldi and Waddel had both visited the village and recorded the presence of a third local clan group, called Timumu. On my arrival I found that this group, consisting of three households, had adopted the Jegase clan name, thus establishing a tidy dualist pattern between one group defined as agnates and a second group defined as affines. A few months before I settled in Sivepe, six households migrated there from Garombi. All the men were members of the Sorovi clan, though of different lineages. A year after they migrated, five of the householders were classified as part of the Jegase clan (by the use of sibling terms of address) while the sixth was classified as part of the Seho clan.

621 614 616 I found a similar pattern in eleven other multi-clan villages I visited. When I first inquired, I was mostly told that they were two-clan villages, the names of the clans being given in each case. Two of the villages were said to have four clans, two pairs of two. Whenever I sought detailed data, I found male householders belonging to additional clans. In Hohorita I was told that the front half was inhabited by two clans, and the back half by two further clans. In fact twelve clans were represented; when this came to light, my informants explained to me that the clan names I had been given at first were those of the 'main' clans. There seemed to be a strong ideological notion that a multi-clan village (or [582] village section) should consist of two local clan groups. Furthermore, this arrangement affects the marriage rules: once Timumu became joined with Jegase under the same clan name, marriages between the two fused local clan, groups became prohibited.

5. *Complementary Opposition in Village Topography*

If the reduction of multi-clan to two-clan villages had occurred only in Sivepe and a few other villages, it could easily be explained solely by processes of clan fusion which are prevalent throughout the area and which will be discussed further below. But I found it to be a regular feature of the

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consolidated Orokaiva villages I visited. Yet historical evidence of earlier settlements precludes the supposition that co-residence of reciprocating marriage groups was ever a regular practice or a preferential rule. Such co-residence can be explained only by Australian pressure towards village consolidation. Far from being congenial to the Orokavia, it may better be regarded as a major potential cause of strain. When the Australian administration planned to intensify this consolidation policy after the Mount Lamington eruption in 1951, Belshaw rightly warned the authorities in a published paper (1951) that the enforced co-residence of affines would create serious social strains which might impede the administration's social development objectives. The Orokaiva response to these social strains appears to have been to restructure the multi-clan villages and give them an organisational form they are more easily able to handle. Under this arrangement agnates, uterine kin and affines live together in the same village but are sorted into two groups of real or fictional agnates. These two groups have affinal relations with one another and stand in complementary opposition in social and political affairs.

In some villages this complementary opposition is further expressed in the position of the two groups in village topography. Nearly all Orokaiva villages are built in two facing rows separated by a fairly wide grassed area known as the *araha*. For cosmological reasons that do not concern us here, these rows tend to run in the direction of the top of Mount Lamington – from downhill (*veari*) to uphill (*avunu*). The two rows are known as *mende* or *bende*, a word which may mean 'nose' or 'hillock' or 'side of a village'. The two sides are designated as *ihane* and *sose*, *ihane* being to the right of a person facing the mountain, *sose* on the left. In 1965, when Sivepe was rebuilt on a new site, all Seho men built their houses on the *ihane* side while all Jegase men built on the *sose* side.

Outwardly, the topography of this new Sivepe does not differ significantly from the earliest descriptions we have of Orokaiva villages in the early post-contact period. These villages also had two sides. They had the same short connecting lines of houses at the *avunu* and *veari* ends of the village. Williams reports that these connecting lines prevent spirits from coming into the *araha*. The only differences are in size and in the style of the houses. The basic innovation in New Sivepe lies in the arrangement of social groups on the village site. Real or assumed agnatic links now exist between all the householders on each side, whereas affinal relations exist between all the householders of one side and the other. The door openings of the affines face each other, but they are separated by the wide field of the *araha*. When people sit down to smoke and chew betelnut in front of their houses, there is easy movement between residents who live on the same side. They frequently visit each other's fires without any ceremony. But one does not cross the *araha* to sit on the other side without a serious purpose. One watches what happens on the other side; one does not always hear it. There is frequent and friendly contact between the sides but it is clear to the observer that the physical distance between them symbolises an equally real social distance.

This residential arrangement between affines is not traditional. If affines happened to live in a traditional hamlet there were no formal patterns for keeping them at a physical distance. When multi-clan villages were first established, households of the various clans were placed next to each other in a

614 Although it is said that members of these clans were allies in the past and today their local branches in the one neighbourhood intermarry, their relationsip to one another in regard to land is not directly determined by the recognition of the historical tie between them.[1] Plant (1951: Appendix 2) suggests that another informal link exists between clans whose founders are said to have been allies or associates.

The typical dispersed clan among the mountain Orokaiva now appears to be only a social category. Its members still acknowledge common descent from a single ancestor and have inherited the same name, but this gives them no special access to each others' land. Men have only a superficial acquaintance with the land of other branches of their clan. Nor does the clan seem to function as a group in any other sphere of activity.[2]

178 614 [574] [602] In the past the scattering of clan fragments in distant villages probably served an important function in facilitating travel, but clanship has been almost wholly replaced in this capacity because a traveller now can usually receive hospitality from various kinsmen, often closely related, who are widely dispersed, for one or another reason associated with social and economic change in the area.

614 [73] [62] We have no details concerning either the present number and size of clans among the mountain Orokaiva or the extent of their fragmentation. There is no doubt that the growth of more nucleated villages since the 1951 eruption of Mt Lamington (see Secs b. and e. of this chapter) is a significant uncontrolled variable in any inference from a situation preceding the eruption. Nevertheless, we think that a reasonable indication of the present pattern of

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[1] Plant (1951:3 and Appendix 2), however, is in complete agreement with Williams (1928:126 ff.) and says that 'ownership of land is vested in the clan'; although this ownership is nominal and in practice each branch of the clan regards the land it uses as its own, people from one village agree that their clansmen elsewhere have 'every right to come and settle at their village and that land would be made available to them' and similar rights would be conceded by members of a 'parent clan' to one of its branches which has assumed a new clan name.

[2] Further information now being collected at Sivepe by the New Guinea Research Unit will show whether or not this statement holds for economic activities in general; cf. these clans with the Star Mountains patriclan (J. Pouwer in Watson, ed., 1964:136) which can 'best be characterized as a name group, since the clan name passes from father to son', and 'is neither exogamous nor corporate with respect to political, social, religious or legal matters'.

556 [888] [178] Our brief investigations indicated that neither seniority by age nor seniority by genealogical position is invariably an attribute of the men who today exercise power among local agnates or have influence in a wider local group. This may indicate recent cultural change. These men very often achieve and maintain such a position as men who are personally active in a wide range of affairs[1] (delegation of responsibility by issuing orders is sometimes spoken of as characteristic of the European system of leadership). They will be vigorous gardeners,[2] organize feasts and participate in a wide range of traditional exchanges, at the same time building a reputation as a man who has acquired material wealth, e.g., livestock and - to a lesser extent now than formerly - traditional valuables.

555 Not the least of their assets may be a reputation as a practitioner of 'white' magic, or as a dangerous man who has assiduously developed the skills of a sorcerer. The roles of 'big men' with these attributes may not be directly related to their age or genealogical status in a descent group. There are often several such dominant figures in a village.

62 [622] The diffuse pattern of authority evident in villages in the neighbourhood under discussion may be ascribed partly to the fact that the present nucleated settlements are the culmination of a series of what the people feel to have been enforced amalgamations of independent kin groups. Even before this process began no source of political cohesion existed in the form of inherited positions of authority commanding the continuing allegiance of sizeable local groups of dependents.

625 The expansion of villages to embrace more kin groups was accompanied by a proliferation of independent minor leaders in a single local group, not by the consolidation of positions of power. A patrol report of 1948 also revealed that the large Isivita, Isoge and Awala 'native districts' had received so little attention from the District Office nearby that the organization of villages under village constables had been allowed to deteriorate 'almost to chaos' since the Japanese occupation. 'One constable was found looking after eight scattered hamlets.'[3] Moreover in some cases migration seemed to have been so extensive that the areas of a number of constables overlapped.

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[595] [1] Cf. kiti iigari (p.30).

[2] Polygamists were able to maintain larger garden areas than other men. On the incidence of polygamy in the past see Williams 1930:130.

[3] Note that in 1924-5 among the Aiga 4 of the 10 village constables were each in charge of 6 or more villages.

facilitated the type of local movements that we noted occurred in the neighbourhood of Sivepe. However at times[1] the density 'on the ground' of villages of the standard size found in the other Orokaiva tribes may be misconstrued as a state of advanced fragmentation of settlement.

It should be noted that the limited amount of relevant detail on the areas where Williams worked[2] fails to indicate a significant difference in size between the Aiga village averaging 26 people at that time, and the Wasida village, with about 6 houses and a single-boys' house.

The Sivepe people have moved only singly or in small groups except when villages have been directed to amalgamate by the Administration. The villagers say that, except when they were evacuated to Ilimo refugee camp, they have never been forced to move from the area which had been held by their ancestors, or to rely on outside groups for access to land. Our evidence indicates that, except for limited expansion into unoccupied land early in the century, all the major shifts of residence of the sample clan branches have been confined to their own territory.

People who have moved to take up rights in other land have done so by exploiting personal ties of kinship or affinity. We found no instances of overlapping land claims at the clan or local branch level such as are found in other areas of Orokaiva territory where enough land was available for whole clans to move the location of their settlement some distance to unused land of a friendly group.

Belshaw (1951:3) observed that in the years preceding the Mt Lamington eruption

> there was much feeling among Government officers that the relatively poor houses of the district, and the small hamlets, should give way to new villages built on the 'Kokoda' pattern, that is a line of substantial houses built around a grassy village square.

The people tended to resist this change, but they had made some moves to amalgamate 'hamlets' (see p.34). He noted also that there was much movement between villages, and that it usually involved a man's leaving his father's land to live on that of his mother or his wife.

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[1] For instance, when the densely populated area stretching from Isivita to Isoge and Awala villages struck the writer of one generally observant report as 'literally a mass of small hamlets' some of them with no more than 20 members.

[2] See Williams 1930:7; W.1.

166 [342] Individual mobility is still high, as we have already noted. Mobility is facilitated by the fact that material for housing - wange timber framework, blackpalm floor, walls and roof-thatch from sago trees[1] - is usually readily available and houses have an average life of only 4 years.

361 [621] The patrol of 1948 which found this area 'literally a mass of small hamlets' alludes to a possibility that the proliferation of these groups had become conspicuous only 'since the Japanese invasion'.[2] The long-term trend after the 1951 eruption, the next catastrophe to cause displacement of population comparable with the wartime upheaval, was towards effective consolidation instead of the proliferation of small groups, such as the scattering of post-invasion days.

361 178 621 [177] When people began to leave the evacuation camp there was a spontaneous trend, which was encouraged by officials, towards building larger villages or, alternatively, clusters of 'hamlets' within sight of each other (Belshaw 1951:5 ff.).

Plant (1951:6) and Belshaw (1951:6) suggested the following reasons for this tendency: that reconstruction would be easier if large numbers of neighbours co-operated; that the renewed interest in co-operatives led to a desire for larger groups; that the example of Ilimo Camp had given people the notion that larger groupings were correlated in some way with higher standards of living; that the Europeans, whose goodwill was now evident, favoured bigger settlements; and finally that their common disastrous experience had reinforced their sense of unity.

621 Although the present-day villages are smaller than those established at the start of the resettlement before the danger area had again been occupied, they are considerably larger than their counterparts of pre-eruption days: Belshaw (1951:2) says that the population of 'hamlets' in the area was of the order of 20 to 80 and the population of the 'hamlet group' under one name ranged from 150 to 400. At present in the Saiho Census Division the average population of the residential unit, in nearly every instance a nucleated village, can be no less than 175.[3]

[613] [1] Some informants stated that materials (except sago) could be collected from any village members' land but most claimed they sought wood only from lineage land unless invited to use trees by particular kin from other groups.

[2] This report was probably the major source of Belshaw's and Keesing's information on the pre-eruption situation.

[3] We do not know the average size of a group of villages known by a 'hamlet group' name such as Awala, Waseta, etc.

Chapter 5

The land and economic development

433 a. Shifting cultivation and residential stability

Under the present system of horticulture the amount of land surplus to current subsistence needs is small and imposes limits to expansion of commercial agriculture.

Williams (1928:154) regards the system of subsistence cultivation as wasteful because it requires such a large area per person. However, the practice of shifting gardens frequently and for short periods on scattered plots does give maximum yields and maintains soil fertility. Brookfield and Brown (1963:166) point out that no successful alternative to land rotation has yet been proven for subsistence agriculture in the tropics. Population pressure and soil fertility are not sufficiently serious problems on the slopes of Mt Lamington to warrant the measures which Fisk (1962) recommends in other circumstances.

[361] Keesing (see Chapter 3, Section e) argued that the rotation of land adversely affected social stability. But the settlement pattern which developed after the emergency shows that there is no necessary connection between dispersed settlement and either the local population density or the method of bush fallow rotation. Some very large villages formed after the eruption (e.g., Soroputa and Kiorota) retained large groups of immigrants who owned no [166] gardening lands near at hand. The present high rate of mobility between other villages, most of which are much larger than before, is not closely correlated with the shifting of garden sites. Among the Chimbu, by contrast, land use is more intensive, but frequent shifts of residence between scattered hamlets are related mainly to gardening needs.

● 178 With the introduction of cash cropping the Chimbu pattern of 361 settlement is becoming more permanent (Brookfield and Brown 166 1963:98). There is little significant evidence either to support 241 or oppose our belief that the planting of individual coffee plots since the mid-1950s has not been associated with a drop in

178 361 166 241 individual mobility among the mountain Orokaiva. We especially doubt the generalization that the introduction of tree crops induces the fragmentation of villages into small 'bush settlements' which many observers thought would be established on the site of the gardens. When Agriculture staff first advocated individual cash-cropping among the Orokaiva, the policy was opposed by mission staff who feared that the villages would disintegrate as each grower moved to live near his coffee garden.

This has not in fact eventuated although there has been some movement from large temporary post-eruption settlements like the Isivita villages when immigrants returned to their own land to plant coffee or cocoa.

425 b. Developments related to land tenure

Disparities between the areas in which individuals and groups held proprietary rights are overcome by individuals acquiring rights to other land through interpersonal relationships. Cash cropping by individuals does not seem to have reduced the flexibility of exchanges and transmission of land rights. Three of the 5 persons who planted coffee on land held by members of our sample are not members of the group holding proprietary rights. Similarly, of 28 people who applied to the local government council for registered areas of cash crop land on 7 blocks held by the sample, 8 were not members of the rightholding group.[1]

[654] The need for such transfers is increased by requests from extension officers and the council to locate coffee gardens contiguously to facilitate pest control, extension services and surveying.

[241] [178] [177] Norton (1962:12) argues that new practices in the transmission of land rights have emerged with the expansion of coffee growing since 1956. Our evidence, however, shows that the significant change has been rather the introduction of a new method of cash cropping. The only experience the Orokaiva had of commercial agriculture previously was of large-scale production on plantations owned or directed by Europeans. They had not entertained the possibility of production on an individual basis.[2]

423 614 Norton expresses a view widely held among government officers[3] that the introduction of perennial crops is seen by members of the

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[1] Four of the other 20 applications were made on behalf of members absent in employment and 2 on behalf of boys.

[2] See Crocombe 1964:30.

[3] See Minutes of Higaturu Native Local Government Council Meetings.

Chapter 2

Contact history and the development of cash cropping

121 The post-contact history of the Orokaiva and their experience with cash cropping are described at length to demonstrate the very limited interactions between the subsistence and advanced sectors of the economy. It is the particular character of these interactions which provides the framework for understanding contemporary Orokaiva involvement in commercial activities.

(a) Initial contact

177 The first recorded contact with Europeans was made in 1893 when the Governor of British New Guinea, Sir William MacGregor, and the Anglican missionary, Copland King, sailed along the coast as far as the Mambare River. It was, however, the opening of the Yodda valley goldfields in 1897 and the subsequent extension of government control by resident magistrates which brought the majority of the Orokaiva into the European orbit.

The first decade of contact was characterised by the extreme severity both of the resistance put up by the Orokaiva to miners travelling to the goldfields, and of the punitive expeditions conducted by the resident magistrates in retaliation for such attacks and for inter-tribal raids. Both Monckton and Murray refer to Orokaiva feelings of 'bitter hostility' (Murray 1912) and of their 'hating the government and their police' (Monckton, quoted in Walker 1909).

714 177 178 [491] [438] By 1907 the area was pacified, a road had been built from Buna to the Yodda goldfields and regular markets along it supplied carriers with food in exchange for tobacco, bottles and other new commodities. Shortly after, two cult movements appeared among the Orokaiva, one the Baigona movement, centring on magico-medical practices, the other a Taro cult, emphasising careful cultivation of taro and subsequent large feasts.[1] Worsley (1957:65-74) identified implicit anti-European elements in the latter and the beginnings of new organisational trends wherein cult leaders were

[1] For a full description of these cults see Williams 1928.

794 not necessarily leaders in the old authority structure but often
177 people with particular experience of white rule (e.g., policemen).[1]
178 Both cults were suppressed by the Administration although the Taro cult persisted until 1928 and possibly reappeared in the Gona-Buna area in 1941 (Worsley 1957:124), concurrent with rumours of imminent Japanese landings.

178 The ending of inter-tribal skirmishing, which directly affected
657 the social roles of the sexes, also extended the physical range of
36 interactions open to individuals and resulted in the proliferation
[721] of hamlet groups, comprising single clan-branches, i.e. a fragmentation of the main villages. Administrative efforts in this period were directed towards countering this latter process and concentrating settlements along the roads to facilitate supervision, encouraging improved building styles (particularly the erection of houses on stilts above the ground) and establishing more ordered 'line' villages built around a central square.

(b) Commencement of cash cropping

241 From its beginnings the mainstay of government policy was the
[657] encouragement of indigenous cash cropping. Regulations introduced in 1894 and 1903 provided for compulsory plantings of economic trees, particularly coconuts, rubber and citrus, but few were exploited commercially. Under the Native Plantations Ordinance 1918 and the Native Plantations Ordinances 1925-52, twenty-six community plantations were established in the Orokaiva area with both government and villagers participating.[2] Cocoa, coffee, oil palm, cotton,
[466] tobacco and rice were all tried; however, owing to a fall in prices,
[434] all but coffee were abandoned. According to Crocombe (1964:16), there was no enthusiasm among the people for the scheme as they considered the cash returns inadequate: each man was required to work sixty full days per year and returns varied from less than $1 to $8 per year, which was well below the returns from working on European plantations at that time. Some 10,000 trees, predominantly coconut, were planted in 1914-15 in the Orokaiva area and by 1921 it was estimated that there were 46,404 coconut trees in the Northern
[433] Division and some 7,000 rubber trees (mostly in the Awala area). The planting of coffee commenced in 1923 and by 1936 there were

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1 Such a development may well also have been characterised by the building up of more extensive group solidarities. Burridge (1960:25) does suggest, however, that the Taro cult may have been a particular expression of a similar type of cult occurring in the pre-contact era.

2 Proceeds deriving from the sale of the crops were shared on a 50-50 basis. For a detailed treatment of these communal plantings see Crocombe 1964.

[73] [133] than might have been expected.[1] However, the withdrawal of the relief teams, including agricultural officers, after the emergency, may have left the people in a psychologically and technologically deprived state, thus further inhibiting their concern with commerce.

[178] [171] The instability of settlement consequent upon these disturbances may also have impeded the evolution of such new forms of leadership and effective group action as have occurred among the Tolai.[2] The careers of such new leaders as were emerging, perhaps with wider group loyalties, have frequently ended catastrophically at important points.[3]

[177] [177] [65] (iii) Lack of co-ordination between the Anglican mission and the Administration. Keesing (1952:21-2) refers to the 'delicate' matter of 'Government versus Mission responsibilities' and alludes to the 'rivalry' between them in connection with the post-Lamington rehabilitation programme.[4] These two agencies are the most potent external forces operating on Orokaiva society and their activities and demands are not co-ordinated, thus accentuating the difficulties of implementing a consistent development policy. Their demands on the villagers' time may conflict, and their views on such important matters as the purpose of education, the role of the teacher and the role of commerce are at variance. The Anglican mission has no formal representation at the policy-making levels in the District though it has great influence in the villages.

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1 Sjoberg, an authority on disaster research, states (1962:363): 'A typical adaption [to disaster in pre-literate societies] is resignation to one's fate. When catastrophe is thought to be engendered primarily by spiritual forces, man can himself do little to alter the course of events apart from recourse to religious and/or magical practices. Recall that he assumes the immutability of the natural-divine order, which includes also the social arrangements about him. Add to this the meagerness of technological know-how of the sort that would be useful in disaster rehabilitation and we see that mute acceptance of one's lot is the logical result.'

2 See Salisbury 1962:338.

3 For instance, the 'renegade' leaders hanged at Higaturu and Sangara; the administrative staff, teachers and the twenty priests-in-training who died at Higaturu in the Mt Lamington eruption, and the Orokaiva leader of the co-operative movement who also died at [166] that time. Many of the most talented Orokaiva are serving outside the region in government, missions and commerce.

4 Belshaw (1951:248) makes a similar allusion.

Other informal transactions involving specific reciprocal obligations include the exchange of labour services, gifts of animals killed during a hunting expedition and more or less casual transactions with non-residents.

Formal exchanges operate on a larger scale than the daily or casual transactions. Crocombe (1966:71-2) has listed the main Orokaiva traditional ceremonies ('pondo' or feasts) as marking initiation, marriages, deaths, enhancement of prestige, land transfers, the re-establishment of peace after a quarrel and the lifting of prohibitions between a man and his mother-in-law. The first and last of these have become very rare. In addition to the traditional ceremonies, parties may now be held to mark Christmas, Easter, the saint's day of the local church, the opening of a school or aid post, and birthdays.

A feast provides an opportunity for settling many obligations which may be quite irrelevant to the ostensible purpose and may not concern the person or group actually 'giving' the feast. It may involve one or several villages or descent groups. The feast foods are almost exclusively village-produced, although small amounts of storebought goods, particularly rice, tinned fish, bread, tea and sugar, are becoming more common. Some feasts, such as those marking the end of minor disputes between individuals, are essentially exchanges and in themselves take little time; others include much ceremonial and may last longer than twenty-four hours.[1]

Parties seldom involve reciprocal exchanges though at some large ones traditional obligations to other participants may be settled. Invitations are usually given on the basis of residence near the location of the party rather than of membership of a particular descent group. Most take place during the afternoon and evening and non-traditional dancing to guitar accompaniment may continue throughout the night. Generally, only the host's household is involved in much preparation for a private party but other men's wives will help prepare food, for which some return is expected. Often only a small number of those attending receive a share of food in the customary manner. Others may participate in the dancing at will, but, if they wish to eat or drink, must purchase food or alcohol. Behaviour at such parties is largely imitative of European practice, to the extent that at one wedding party observed the bride was presented with a quantity of old plates, dishes and cutlery by other villagers.

In addition to these exchanges with kinsmen, co-residents and neighbouring villagers, there have been long-established trade links between the inland and coastal people. This trade originally

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[1] In the past they sometimes lasted several days.

Only one man owns a mosquito net and there is only one transistor radio in the village. Some of the older people still wear tapa cloths but new ones are seldom made now. The more common form of dress is a pair of shorts, a skirt or a laplap, the skirts being mostly sewn at mothers' union sewing classes run by the Anglican mission at Sasembata.

Two men in the sample own shotguns, costing $58.75 and $59.75. These are the only items in the village representing large capital outlays and several other men had made contributions of $2 and $6 towards their purchase, so they can borrow them in return.

None of the houses conforms to the traditional Orokaiva style, but all are built wholly of local materials. They contain no raised platforms for sleeping, no shelves for food storage, and no cooking facilities other than an open fire. One man has built a 'kitchen extension' to his house while several other households cook primarily in shelters outside. Also, one man has built a simple table and bench outside and some members of the household occasionally eat at this.

A creek running beside the village provides the water for bathing, cooking, laundering, washing dishes and pulping coffee. Paths are narrow and unimproved despite constant use so that they become difficult to negotiate in wet weather. Not all households have pit latrines and those that do only use them irregularly. Small children often defecate on the village surrounds and standing water in various parts is a further health hazard.

Inonda

Inonda lands run from the low plains (200 feet above sea level), beside the Sambogo and Girua rivers, into the foothills of the Hydrographers Range. They include a variety of landforms, soils and vegetation - one-third of the village lands are covered with soils of the Popondetta family, which are well-drained sandy loam volcanic soils, supporting grasslands of Saccharum spontaneum-Imperata cylindrica alliance; one-fifth consists of coarse-textured riverine deposits which are moist, apparently fertile and support forest and regrowth. These are preferred for food gardens, although gardens are also made on the lower valley slopes of the Hydrographers, where the soils consist of well-drained clay loams covered with dense forest or secondary growth. The soils of the foothills are shallow and stony, supporting lower montane rainforest and, as with the grasslands, this area is used only for hunting and foraging. The CSIRO survey classifies most of the Inonda lands as having moderate land-use potential.

511 the slightly wider range of property evident in Inonda. Sivepe has slightly higher monetary assets than Inonda ($18.96 and $18.52 per household) and a slightly higher percentage of cash in hand (26.9 per cent compared with 21 per cent).

438 178 The substitution of imported items for equipment and property traditionally produced within the village has eased many subsistence tasks such as clearing bush and gardening. Traditional cooking utensils, which took time to make and were easily broken, have been replaced by metal pots and dishes. Guns (and torches) have brought more reward for less effort in hunting, and fishing has become easier with goggles and elastic-propelled spears. Mosquito nets and bedding have made sleep more comfortable. Storebought goods and introduced plants have made possible a more varied diet, particularly during the dry season. The improvements have been on a small scale and have required the diversion of effort into non-traditional channels to obtain the necessary cash. With the exception of the trade store owner in Inonda, few people use cash to make large productive investments (discounting the substitution of steel for stone tools) in village-based activities.

535 Another 30 per cent of the time is devoted to traditional
177 dancing at events inspired by the external agencies, in particular
[527] church festivals and public holidays; 18 per cent is devoted to what
might be called 'institutionalised parties', for example, the
[178] celebration of a church wedding or the opening of a women's club,
again events associated with the contact situation; and a mere 14
per cent is devoted to feasting of a traditional nature, such a
practice now apparently being relegated to a minor place in Orokaiva
society.

All ceremonial events tend to be concentrated around Christmas
when the gardens are in full production, and involving at that time
as much as 6.2 hours per man-week in a single week (week 1).

461 (b) The external sector
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All commercial production, together with those activities directly
associated with the presence of the external agencies (for example,
church services, formal meetings, etc.), fall within the external
sector of the economy. Together they account for 10.6 hours per
man-week, of which only 3.2 hours (spent in cash cropping and paid
work) are concerned directly with the acquisition of cash.[1]

(i) Cash cropping. Most of the time spent in cash cropping is
devoted to coffee production - 1.3 hours per man-week - although
only five households are directly involved in it. The buying season
[221] is determined by the OCGS to coincide with the flush and extends
from March to October. There is no off-season buying and coffee-
producing activities are confined to this period, particularly the
months of April through to July. Clearing of the gardens and any
pruning are restricted to the start of the season to facilitate
access to the trees. Most harvesting and processing is done early
in the season, falling off gradually as stocks are accumulated, the
main flush passes and the opportunity to sell is awaited.[2] While
1.9 hours per man-week were expended on coffee production for the
whole of period I, virtually all activity was confined to the last
six weeks when 4.2 hours were expended (2.0 hours on harvesting and
the balance on processing). During period II only 0.5 hours were
devoted to production, with a further 0.5 hours to marketing per
man-week.

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[1] However, a further 0.3 hours per man-week are spent in marketing subsistence crops and products. See p.88.

[2] This reduction in the level of activity might equally be related to the initial sale of coffee, disappointment at the price obtained resulting in a marked loss of enthusiasm. Further, during period II, the labour requirements of the subsistence sector increase as do the demands made by the external agencies, and these factors may also influence the level of coffee production.

The one age group not considered in the survey is children. Customarily the parents delegate various tasks to them as they get older, but the current picture is somewhat complicated by the fact that over 80 per cent of all children in the area receive at least a few years' primary schooling. Since the type of education provided has little direct bearing on village life or economy it is not uncommon for such children to profess some disdain for village tasks and the extent to which they assist their elders frequently depends upon the degree of parental authority. Children up to the age of about ten years normally play around the village in the morning and evening, going down to the creek during the hottest part of the day, when they might do a little fishing. If they accompany their parents to the garden they are left in the garden shelter or under the shade of a tree and the older ones are directed to look after the younger. Otherwise the only jobs they appear to do regularly are fetching water and tending the fire, although the older girls are given such household tasks as washing dishes and also attending to infants. Boys over the age of about ten years may hunt, build traps in the forest and do some of the more hazardous jobs like scaling trees for green coconuts, while both they and the girls are called upon to assist in pulping coffee. For those attending school, most of these activities are restricted to the weekends and holidays; even then they may resist their parents' requests for assistance, preferring instead to do a little hunting or fishing for their own amusement or to picnic together.

561 [871] 857

<u>The weekly pattern, daily routine and duration of activities</u>

It is customary for ethnographic surveys to devote a section to the description of a typical working day and, in its treatment of the Orokaiva, Williams' account (1930:21-31) is no exception. What he considers to be a normal routine comprises an early breakfast from the cold remnants of the previous evening's meal followed by the departure of family groups to their gardens where they pursue their various tasks. By noon these are completed and most families are back in the village to rest in their houses for an hour or two. 'The real activity of the village commences at about three o'clock' with the preparation of the evening meal by the women, the men meanwhile restricting themselves to sedentary tasks or conversation. This is eaten near nightfall and a period of conversation or informal entertainment follows until everybody retires to sleep. Such a routine may be modified by climate, ceremonial activities and the occasional demands of the Administration and recruiters.

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Regardless of whether the daily routine in the 1920s fully conformed to Williams' description, the present pattern is substantially different, not only for those activities which are directly related to the increased commercialisation of the economy and interaction

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8: Waddell & Krinks E-4,5 (1964-1965) 1968 OJ23 Orokaiva OJ23

512 [178] with the external agencies, but also for the customary subsistence tasks. Quantitative analysis reveals significant patterns to be existing at two levels - between the days of the week and within each day.

(i) The weekly pattern. The Sivepa people speak of Wednesdays as 'Mission day' (for work at Sasembata mission station), Fridays as 'Council day' (for road maintenance and cleaning the village) and Sundays as a day of rest and attendance at church services. Of the remaining days, Monday and Tuesday are devoted to cash cropping, [805] and Thursday and Saturday to subsistence. They claim to have been directed by the Higaturu Local Government Council to work according to this routine and while it is not strictly adhered to, the concept of the week is firmly implanted in the Orokaiva mind (see Table 6:9).

512 461 [796] The basic household tasks and harvesting of subsistence crops are sustained throughout the week with little variation in time allocated, while others tend to be specific to certain days. Sunday (with Wednesday) has the shortest activity day, of 5.6 hours, this being largely a reflection of the Church's insistence that it be treated as a day of rest. Well over half the day's activities are devoted to attendance at church services, the harvesting of foodstuffs, and household tasks. Two other categories of activities assume a greater level of importance on Sundays: social obligations, particularly informal visiting, and other subsistence activities (house construction and the preparation of tools and equipment). Both are connected with the fact that, following church, much of the day is spent in the village. Although church and council work are largely restricted to their allotted days, little time is actually devoted to them and they do not appear to modify substantially the activity patterns for those days; similarly no direct relationship can be drawn between time spent on cash and subsistence cropping and the pattern of activities on the days ascribed to these tasks.

[527] The marketing of subsistence crops is restricted to Thursdays, the day of the Saiho market, while the time devoted to social obligations reaches a peak on Fridays and Saturdays when 'parties' are normally held. Sundays apart, however, the daily variation in activity patterns is not great. The total range in activity time for all the days is only 0.5 hours but on Sundays a smaller proportion of the time is directed towards productive enterprise - only 56 per cent of the total. The other days, with the exception of Friday, fall within the range of 73 to 84 per cent. On Friday only 61 per cent of the time is spent productively, probably because garden tasks are disrupted by council work in the early part of the morning. In general where extra-village activities recur each week, particularly early in the day, the proportion of productive work falls. This is apparent in the case of lengthy tasks such as clearing and sago-making, which are almost entirely restricted to those weekdays free of external commitment.

branches and to drive the fish into the nets. On both occasions during the survey over twenty people were involved. Operations such as these are initiated by the older men. Participation is voluntary and seems to be based on residence as much as kinship.

Construction of houses generally involves some collaboration in erecting the timber frame and in preparing roofing sheets from sago-palm leaves, but much of the construction is carried out by the housecowner alone. When assistance is received, it may be from a wide range of kin, including agnates, matrilateral kin and affines. The main reason for the size of work group shown as involved in construction at Inonda is the erection of the copra-drier when all the men in the village collaborated.

It is worthy of note that, except for fishing and sago-making, all activities involving larger work groups are non-traditional activities directly associated with the monetary sector. The largest work groups occur in copra-making and the next largest in cultivation of coffee. As described above, copra-making was initiated by the entrepreneur as his own project but subsequently others combined to make it a village project. Cultivation of coffee is carried out usually by members of the household that owns a garden, sometimes assisted by other kin who have no cash crops or by young unmarried men. There is, then, a clear differentiation between traditional and post-contact activities in terms of the organisation of work groups.

The activity patterns of selected individuals (see Table 7:16)

Iemba. This man is unmarried, aged 21 and lives in the household of his elder brother. He reached standard V at Uruvu mission school and began training as an aid post orderly at Saiho hospital, but left after eleven months, feeling that his current conditions and future prospects were not satisfactory. He then lived for some months with a relative of the same lineage at Ijika, returning to Inonda for several weeks during periods I and II and remaining permanently from late August onwards. In total, Iemba was absent for 85 days, 92 per cent of which were on visits either to his lineage brother or, for shorter periods, to other relatives. For 3 of the remaining 7 days he was sick and stayed at Hahema village, 2 days were spent at a feast, 1 at a party and 1 looking for work at Popondetta.

Iemba's observed activity patterns seem fairly representative of the behaviour of young unmarried men in the area. Probably his attitudes are also quite widely shared: although he frequently helps his brother and other kin in Inonda and other villages in subsistence tasks and cash cropping and will almost certainly settle in the village when he marries,

attempts are being made to expand and diversify cash cropping by planting more coffee and erecting a communal copra-drier in Inonda and establishing a communal garden in Sivepe. However, in all of them, serious problems have arisen or the venture has actually been abandoned. These facts point to a certain lack of direction and perception of the most appropriate techniques in the development of commercial agriculture.

(b) The relationship of subsistence to the external sector and the availability of surplus labour

Perhaps the most significant general conclusion to emerge from this survey of activity patterns is that the Orokaiva economy continues to be essentially tradition-oriented. Such monetary activities as exist seem to be additional to, and do not replace, subsistence activities. Although the two villages have, since contact, been incorporated into a wider system, individual participation in it remains essentially passive. There is now a real need for money, and for the products that money can buy, and commercial production within the village is perceived as one way of satisfying these needs. Because of the people's familiarity with cash cropping, and of the under-utilisation of available labour, it is not easy to see why it should not have been more extensively adopted.

There is plenty of evidence that the villages continue to be tradition-oriented. In particular, there is little suggestion of 'a reduction in the acreage under subsistence crops, a narrowing of the normal range of good crops and changes in their relative importance' or 'of a reappraisal of the agricultural value of different types of land and soil' or of 'the movement of whole villages to new sites...the movement of individuals from villages which are poorly located for commercial farming to those which are more favourably situated...[and] the departure of individuals or nuclear families from the village to become independent farmers' as have been indicated by Ward (1964:487-93) in the case of Fiji. No distinct socio-economic groups have emerged at the village level. By contrast, in a recent study of village agriculture in Aitutaki, Cook Islands, three economic groupings are identified - the gardeners, gardener-employees (those with part-time jobs) and employee-gardeners (holding full-time positions) - this breakdown in the homogeneity of the communities being considered as one measure of the degree of commercialisation of the economy (Johnston 1967:36-8 and 91-3). Finally, there is as yet no evidence of individual specialisation where 'The planter restricts and narrows his activities in two directions: he concentrates upon agriculture to the exclusion of non-agricultural activities and on cash crops to the exclusion of non-cash crops' (Johnston 1967:60).

Rimoldi, in investigating the recent history of settlement among the Mt Lamington Orokaiva (1966:39-47 and 65-70), distinguishes

three elements of change, first, a trend towards the amalgamation of hamlets into larger units which assume the formal layout now characteristic of Sivepe, second, considerable mobility of settlements, and third, a high degree of individual mobility. However, the first and second he considers to be largely a function of Administration pressures and of ill-defined aims to improve the economic base of their livelihood (as is characteristic of Sivepe's intended move), and the third to be related to the 'vicissitudes of social relationships' rather than to any connection between settlement and garden sites.

The changes which have taken place in the range and relative importance of subsistence crops largely reflect the need to find a more reliable and adequate food supply during the dry season, although the tendency to increase the acreages of both yams and Xanthosoma at the expense of sweet potato and taro might also reflect a conscious effort by some to economise on time and effort in the subsistence sector.

The survey of activity patterns reveals little variation within the samples in the relative importance of the subsistence and external sectors: even those most strongly oriented to cash cropping are concerned first with achieving subsistence. The two most active people in the Sivepe sample, Linton and Palminus, register an above average level of activity through the whole range of tasks, the manner in which they allocate their time being proportionately little different from that of the sample as a whole. This applies equally to the entrepreneur in Inonda, who spends over half his working week in productive subsistence activities. His entrepreneurial activities are directed primarily towards a trade store which is not particularly demanding in terms of his time. In this respect his cash-producing preferences parallel those of other men where contract or casual work is preferred since, in the absence of strict schedules, it conflicts little with the requirements of the subsistence routine.

There is little difference between attitudes toward cash and toward subsistence crops. In particular the attention given to the commercial trees parallels that given to coconuts, areca, breadfruit and other economic trees associated with the subsistence sector in that, apart from planting and harvesting, maintenance is essentially restricted to facilitating access. The absence of any specialised techniques of arboriculture is carried over from subsistence to cash crop trees, the only distinction being that the cash crops are planted in formal stands. The work routine is much the same in that sustained and regular effort is neither required or given and the duration and intensity of individual periods of cash cropping work differ little from that for productive subsistence work.

8: Waddell & Krinks E-4,5 (1964-1965) 1968 OJ23 Orokaiva OJ23

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Nevertheless it is incorrect to apply Salisbury's proposition (1962:216-20), that the change from a stone to steel technology in the New Guinea Highlands has resulted in a saving of two-thirds in the time allocated to specified axe-using tasks, as further evidence for labour availability. Apart from the fact that the proposition itself is not based on quantitative data and must be regarded only as a hypothesis, if, for the sake of discussion, the factor of 3 be applied to time spent in clearing, fencing and construction (the main axe-using tasks) in Sivepe and Inonda, an additional 10.8 and 11.6 hours per man-week respectively would be required for the work with a stone technology. Since 10.7 hours in Sivepe and 10.0 in Inonda are already being directed to the external sector each man-week virtually all the labour time made available as a result of this technological change is in fact being utilised.

While there is no evidence from the activity patterns to suggest any seasonal conflict in the labour requirements of cash and subsistence cropping there is, nevertheless, some inconclusive data from both villages to suggest that a substantial extension of cash-producing activities would conflict with the requirements of the subsistence sector. In Sivepe the processing of coffee - the most labour intensive of all cash cropping work - and the harvesting of rubber typically occur early in the day and so before the start of the normal daily routine, suggestive of the fact that extra time is 'made' to carry out these tasks.[1] At Inonda it appears that where a household head engages in full-time employment for more than two or three weeks the family finds difficulty in maintaining its food gardens and so meeting all its obligations.

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Given that the development of cash cropping bears a direct relationship to activity patterns the data suggest the basic issue to be not one of absolute availability of labour but rather of the organisation of labour and time. The hypothesis is suggested that in a primarily subsistence-oriented economy, those cash-producing activities which do not demand a significantly different and longer work routine will be preferred. The basic feature of this routine is that the activity need not be pursued to the exclusion of others and each can be interrupted at will. So the Orokaiva working day (and week) encompasses a wide range of tasks, each pursued for only a relatively short period of time. As with the Aitutaki villagers of the Cook Islands, 'commercialization has led to few appreciable innovations in the cropping system, land tenure, technology or labour' (Johnston 1967:68).

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The present relative adjustment of cash to subsistence cropping may only be a temporary feature of the village economy and the fact

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[1] However, a higher yield of latex is also obtained by tapping early in the day.

8: Waddell & Krinks E-4,5 (1964-1965) 1968 QJ23 Orokaiva QJ23

433 that it has been reached at all among the Orokaiva is probably due both to the level of out-migration into the permanent labour force and to the local opportunities for wage labour and contracting and so the ability of village residents to meet many of their needs for cash by other means. In the sphere of activity patterns therefore, viability of the traditional system remains largely unimpaired.

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561 the ones with the largest surplus of production above their immediate household needs. This pattern, in association with the particular roles of the oldest and youngest age groups, appears to support the widely held proposition of individuals building up 'credit' within the community to draw upon in their old age. The data might equally be interpreted as suggesting that most of the transactions are concerned with personal aggrandisement and only the middle age groups are capable of achieving this. Thus, in the exchange of labour services, there is a significant outflow from the 15 to 24 years age group and an inflow into the 55 years plus - that is, from a group where labour is the one abundant resource to another where it is scarce and needed to achieve subsistence - yet the 35 to 44 years group also registers a net inflow. Much of the labour received by the 55 years plus age group was connected with sago-making and this same group accounted for half the sago distributed. Since the individual concerned, within this age group, was unable to collect his own breadfruit and had no other way of reciprocating other gifts, offering one of his sago trees proved an effective way of settling his obligations and, at the same time, meeting his own dry season food requirements while expending little of his own labour.

[556] Each of the three other age groups plays an important role in the flow of specific resources. The 45 to 54 years group largely controls the movement of pigs, one of the main traditional indicators of wealth, but not of products associated with the monetary sector. These latter are divided differentially between the 35 to 44 and 25 to 34 years groups, the first being concerned primarily with cash cropping, from which its revenue is mostly derived and therefore its access to storebought goods, while the second relies heavily on remittances and parcels of goods from relatives in wage employment.

In effect the three middle age groups control the circulation of 'wealth', with that of the 25 to 34 years group being founded almost exclusively on non-traditional goods, that of the 45 to 54 years on traditional, and that of the 35 to 44 years encompassing the two where they are derived from agricultural endeavours (garden produce and cash crops).

<u>The relationships between exchange and the socio-economic status of transacting partners</u>

177 Within the total economic system, of which the subsistence villagers comprise the basic stratum, a number of distinct socio-economic categories can be identified with each playing a distinctive role in the pattern of exchanges. On the one hand there are the institutions or organisations associated with the expatriate community or directly promoted by them - the Administration, the OCCS, the Anglican mission, the trade store, the market, etc. - with which transactions are of a formal nature and operate between the individual villager and others in their roles as members of an institution. On the other

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178 166 there are those indigenes who have moved temporarily or permanently away from the village economy - to take up blocks of land as ex-servicemen settlers at Sangara or to find employment locally or in one of the main urban centres. With these people personal contact in economic relations persists.

166 Most of the resettlement blocks are less than five years old and still being developed. The settlers remain therefore partly [434] subsistence-oriented and, with only a limited return from cash crops, their incomes are small. Among the Orokaiva contacts with kin are sustained since many live within a day's walk of their home [465] villages. Most of those working within the District are employed on a casual basis for salaries of less than $4 per month from which, supplemented by rations, they derive all their sustenance, although plantation labourers frequently establish small gardens of their own. Again regular contact is maintained between them and their home village, or new links are forged, as between mission employees [434] and neighbouring villagers. Most of the wage earners resident outside the District are permanent employees of the Administration with larger incomes than any members of the previous groups - two young men in Port Moresby were earning $9.35 and $8.27 each per week. For these people visits to the village are restricted to bi-annual leave but contact is maintained through correspondence and remitting gifts.

437 Table 10:15 details the movement of goods and services between the sample and the various groups. As might be expected, virtually all (96 per cent) of the subsistence produce acquired by the sample originates from villagers. Of produce disposed only 73 per cent is directed to villagers and over 3,000 lbs (21 per cent) go to organisations. In fact two-thirds of the latter was consumed by the researchers; however, a significant quantity is purchased by the external agencies. The movement of certain items assumes a rather [438] different pattern in reflecting the needs and circumstances of the several groups. Virtually all the lime acquired is obtained through local wage earners or Saiho market, and all the fish through hawkers from the coast or, again, through the market. Similarly areca is widely distributed, 13 per cent of disposals going to local wage earners and 11 per cent to the market. While the circulation of such goods is insignificant in relation to the total volume of produce, the dispersal of kin over a wide area facilitates the movement of locally scarce resources. A small but comprehensive range of subsistence produce is disposed to local wage earners, reflecting the felt need among such people to supplement their restricted diet.

The exchange of labour services is, effectively, restricted to subsistence villagers, with physical separation and distinctive work patterns precluding any interaction with the other socio-economic categories. Although villagers do give considerable assistance to settlers on their blocks, this involves lengthy

[TEXT CONTINUED ON PAGE 215]

437 produce, while the second results in sustained interaction with affines at the probable expense of agnates living elsewhere. The latent obligations to more distant kin are revealed on such occasions as an unexpected visit Palminus received from his father's [431] sister's son following the birth of Palminus' child. His embarrassment at not having previously advised the man of the birth was only compensated by his making an immediate gift of $2.

The facility with which kinship links can be drawn between most, if not all, of the villagers makes it difficult to identify significant, yet mutually exclusive, categories of exchange partners. Exchanges between two individuals might, for example, be variously interpreted as being between neighbours, affines or age-mates. The most important economic connection is between an individual's families of orientation and of procreation, where the two households are located adjacent to each other. Although each maintains separate gardens, between such linked households there is a substantial, if variable, degree of inter-dependence and the network of exchanges may incorporate three generations.

437 Other major exchange relationships operate with affines, matri-
561 lateral and patrilateral kin and are typically restricted to members
[602] of the individual's age group, for example, cross-cousin, wife's brother and sister's husband. Such coeval links also extend to individuals with whom there is no apparent bond of kinship. Traditionally these links may have been restricted to fellow-initiates, who were of both sexes and stood in a defined relationship where [178] each referred to the others as nanamei.[1] Since the disappearance of initiation ceremonies the connection is now of a more informal nature, reflecting similarity of interests.

437 In effect, regular exchanges operate between members of one's
602 own generation, where partners may be drawn from a wide range of kinship categories and with other generations in the case of primary and secondary kin (see Table 10:18). Other large exchanges which fall outside this pattern are mostly of a specific nature and characterised by immediate reciprocation, as in the case of pigs and sago-making. There is only limited evidence to suggest that the movement of specific goods and services follows distinct patterns, although those relating to the external sector do move almost exclusively between primary kin. However, this fact cannot be considered to indicate a different attitude to the ideal of reciprocation on the part of those having direct access to cash crops and money. Where an individual's family of orientation renders assistance with processing coffee, it is normally without cash crops of its own and where remittances are received from sons,

[601] [1] Meaning 'my children', i.e. 'the children of whom I am one'. See Williams 1930:180.

438 daily exchanges of products between villagers when they have a temporary surplus, rather than a continuing specialisation. Al-
[433] though some individuals do tend to concentrate more time than others on certain crops - as the widower in Inonda does with yams[1] - . surpluses (and their counterpart, shortages) are frequently the
[574] result as much of chance as of policy. Thus, near the end of the dry season a settler held a feast at short notice to mark the end
[431] of a dispute with an Inonda man. The Inonda people decided not to make a return presentation at the same time since they had only sago available and would be humiliated if they offered this in return for the others' taro. In the event, contributions by people from the settlement blocks and other villages included more banana and sweet potato than taro.

The circulation operates at several different levels: the level of the village itself, that of a context which is more or less restricted to the occurrence of close kin and which, except perhaps for some affines, is only about three miles in radius, and finally the broader district level, which embraces greater environmental differences and is the sphere of operation of the comparatively
[436] long-distance hawkers from both the coastal and mountain areas. At
[178] this level, the volume of exchange is small; it is not necessarily based on kinship or even friendship ties and it is now almost entirely monetised.

437 (ii) Labour services. Labour assistance in the subsistence sector shows a pronounced seasonality (see Table 11:6). This is
221 largely due to the fact that 46 per cent of all the assistance received in the subsistence sector during the survey was in sago-making and all of this occurred during three weeks in the dry season.

Table 11:6

Inonda: mean weekly transactions of labour services during each recording period
(hours)

Labour services		Period I	Period II	Period III
Cash sector	Acquisition	1.9	4.0	1.5
	Disposal	2.5	1.6	2.6
Subsistence sector	A	8.3	67.6	10.5
	D	11.5	38.8	4.7
Total	A	10.2	71.6	12.0
	D	14.0	40.4	7.3

[1] Cf. pp.166-7. A
A, [See Category 512, pp. 166-167--Analyst]

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Two largely unrelated agricultural systems are practised side-by-side, with cash cropping (or the alternative cash-producing activities) utilising labour time surplus to the requirements of the subsistence sector. Productivity in both types of production is low and, furthermore, any expansion in cash cropping is not necessarily paralleled by an increase in productivity or reduction in subsistence agricultural activities.

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The Administration's extension policy is concerned both with 'raising the level of subsistence in the villages' and 'introducing the economic means of supporting a higher standard of living (DASF 1959). While such a policy might promote development with the least possible risk to the producer, it has a direct bearing on both the quality and degree of individual involvement in commercial activities.

One agricultural extension officer has noted that 'The subsistence farmer's involvement in cash-cropping has...added to the complexities of his decision-making and lays increasing emphasis on his role as a farm manager. He now has to make more complex decisions and choices about what to produce, how to produce and how much to produce' (Reed 1966). Individual specialisation is, effectively, discouraged because the mechanism is not being developed for an exchange of subsistence produce which might permit some people to concentrate exclusively on cash crop production. Problems of a lack of technical knowledge and equipment are intensified in situations where cash and subsistence cropping are pursued simultaneously. The essential homogeneity of the village remains therefore largely unimpaired. The nature of the people's contacts with the external economy and the expatriate community only serves to reinforce it. These contacts are few and tend to be formal and innovations only permeate through with difficulty. Villages tend to be isolated from the main centres of expatriate activity and, in consequence, people find it difficult to participate in those cash-producing activities, such as wage labour, which provide a regular source of income. The basic functional discontinuity between Orokaiva village and expatriate settlement tends to sustain a situation where money is used primarily to exchange 'exports' for 'imports' and has little impact on the rest of the village economy; while the apparent control which expatriates exercise over all successful economic diversification and other developments tends to discourage initiative within the village.

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The problem of stabilising the world market situation for cash crops, or at least of cushioning the producer from the price fluctuations, cannot easily be resolved, but some of the other problems are amenable to direct intervention.[1] Given their long and mixed

[1] As exemplified by the apparent success of the Ombi-Tara scheme (see Morawetz 1967).

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When the Japanese landed at Gona Mission in July 1942, all the Yega - men, women and children - fled into the bush and made their way to Ambasi, 30 miles to the north-west. There they lived for the next two years, returning to the Gona area in 1944. By 1950 they had settled down again on their seven traditional village sites along the coast between Cape Killerton and the eastern end of Holnicote Bay. One new village was established at Surilai on Cape Killerton.

Clan membership determined the village of residence of each family in the Yega tribe. In some instances, place of residence was determined by membership of a particular sub-clan. Of the eight Yega villages, four were inhabited by male members of more than one clan. The remaining four villages were each occupied by members of only one clan and their wives and children.

After an abortive attempt at communal farming in 1947-52, the large village of Beporo was brought into existence under the direction and guidance of two educated young men who taught that a large village close to the mission church, school and hospital was the 'civilized' form of settlement. Some three quarters of the Yega people, apart from those in wage-work away from home, moved to Beporo village which was expanded to accommodate them. Although a broad pattern of clan residence could still be recognized in Beporo, the clans themselves began to lose their functional identity within the tribe. There was a weakening of traditional kinship patterns of co-operation in everyday activities.

Although their earlier communal farming venture had failed, the Yega were still very much attracted to the idea of making money from cash crops. Accordingly, with the advice of the District Agricultural Officer (D.A.O.), they cleared 15 blocks during 1957-8 and planted them with coffee trees. These blocks ranged from a quarter of an acre to two acres in area; one was planted by a group of six relatives, the remainder by individuals of various clans.

For the most part these coffee blocks were cleared in areas of secondary forest which normally formed part of the land rotation cycle for food crop production. Although they were located at distances of up to four miles from the blockholders' villages, only one man changed his place of residence as a direct result of establishing a coffee block. This man moved to Gatara, two and a half miles inland from his previous home and established a single-family homestead, a settlement quite out of keeping with traditional Yega practice. The coffee scheme failed, partly on account of low prices received for early pickings, and partly because in 1960 a much more ambitious cocoa-planting scheme, the so-called Yega Scheme, was begun. It absorbed most of the energies of the Yega during the following two or three years.

Genesis of the Yega Scheme

The term Yega Scheme has been applied by the Administration to the cocoa-planting enterprise undertaken by the Yega people at Ononda, four miles inland from Gona Mission.

On several occasions prior to 1960, the Yega people discussed with the D.A.O., Mr M.H. Belfield, their desire to plant extensive areas of cocoa. Suitable land was not available near the coast, and it was not until early 1960 when an old pre-war road was re-opened between Gona and Popondetta that access was provided to suitable forest country further inland.[1] In March 1960 Yega representatives advised the D.A.O. that land was now available and sought his advice and assistance in promoting cocoa production. The land available was mature rain forest situated about four miles inland, just north of Ononda Creek (see Fig.5) A. This land was part of an area over which the Bowori clan of Yega had exercised rights until they were completely wiped out in inter-tribal fighting with the neighbouring Ahora people. Their land was never reallocated among the remaining Yega clans, but was used as communal hunting land to which no one Yega clan had any stronger claim than others. No complex pattern of clan rights applied in the area so there was no need for compromise among clans during the allocation of blocks.[2] Allocation of this land, whether for subsistence gardens or for cash cropping, was vested in the chief Yega land custodian, Nixon Kairembora, who fully approved of the cocoa project.

The land was inspected by the D.A.O. and pronounced suitable for growing cocoa. Investigations by the Department of District Administration showed that ownership of the area specified for the cocoa project was not disputed.

Agriculture and administration officials tried to avoid some of the problems inherent in the Higaturu Council Land Registration Scheme (see Crocombe and Hogbin 1963:89-96) by suggesting that plantings be contiguous rather than in scattered plots of irregular size and shape. Contiguous planting would make all blocks

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[1] The road was built pre-war by the Rev. Henry Holland and was used by the Japanese. Its reopening was mainly due to the efforts of the Anglican missionary in charge at Gona, Rev. E. Kelly.

[2] This exceptional circumstance and its bearing on the accord among clans which had prevailed, at least up to the time of writing, is relevant not only to studies of the Yega Scheme but also to the possible use of this scheme as a 'pilot' for future projects.

A. [For fig. 5 see Category 102, p.45--Analyst]

accessible by road, enable more efficient agriculture extension services, facilitate pest and disease control, and permit a centrally located cocoa fermentary.

To ensure competent local supervision of the establishment of the cocoa plantings, the Agriculture Department Extension Service built a village on the north bank of Ononda Creek. Here trainee agricultural field-workers lived while they worked with the Yega advising and assisting them in the unfamiliar tasks of laying out their blocks, 'lining' the shade trees and ensuring correct spacing of the cocoa trees. The D.A.O. entrusted a local Yega man (Napoleon Aiga of Sambori clan) with the supervision of this work. Although he is not a trained agricultural worker (he was a clerk in the agriculture office at Ioma when selected for the job), Napoleon is a man of great drive and ability; he had the confidence of the Yega and was able to direct and control the trainees who worked with the villagers in the early stages of the scheme.

Beginning in May 1960, an area approximately 7 by 120 chains was rapidly cleared by communal labour with most of the men of all Yega clans taking part. Provision was made for a road down the centre of the cleared area; 48 blocks were marked off, 24 on each side of the central road on 5-chain frontages. The number of *blocks was based on the number of men who originally showed* interest in participating in the project, plus two special blocks: one was allocated to the mission and one beside the Gona-Popondetta road was reserved as the site for a future fermentary. The remaining 46 blocks were allocated by ballot to participants in the work. The 46 men to whom blocks were allocated represented almost all Yega lineages; those lineages not represented were ones in which only old people remained in the villages, the young men having left home to work in paid employment elsewhere. After the ballot, one week was allowed for voluntary exchanges before a firm list of blockholders was drawn up. This firm list was, however, still subject to alteration within the framework of the traditional Yega land tenure system. Any cultivator considered to be unsatisfactory could be disciplined by the land custodian; if a blocholder failed repeatedly to comply with the standards expected he could be dispossessed, and his block reallocated to another cultivator. One such reallocation did, in fact, take place late in 1960.[1]

[1] The blockholder ignored three warnings from Nixon about his laziness. As a result he was dispossessed and his block allocated to another cultivator; compensation of $3 for work done already was paid by the new blockholder.

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The Land (Tenure Conversion) Ordinance of 1963 altered the tenure position by permitting the granting of individual title to any blockholder who desires it. By July 1964, 17 blockholders had applied for registration of their blocks as the first step to obtaining individual title. When conversion orders were made in favour of these applicants, their blocks were no longer subject to traditional tenure.

With the establishment of individual titles, a pattern seemed likely to develop of dispersed homesteads on smallholdings. In the original clearing no demarcation had been made of the fourth (rear) side of each block since by common agreement each blockholder was permitted to extend his area of cultivation by clearing additional forest on that side. Limits to such clearing were set by Epa and Ononda creeks to the south, and by the Gena and Seseko clan boundary markers to the north. This meant that there was room for extension of each block to a maximum of seven to ten acres.

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The initially cleared area of each block, about one and a half acres, was ready for planting with shade trees (leucaena glauca). By August 1964 each block had been planted with about an acre of shade and cocoa trees. In some poorly-drained sections, numbers of trees of both types had died but the drainage problem could, it was thought, be overcome by deep-ditching. Late in 1962 and *early 1963 many* young cocoa trees suffered a severe setback as a result of infestation by army worm (tiracola plagiata). Marked irregularity was noticeable in the growth of the cocoa trees: this may be attributed to the depredations of army worm and, to some extent, to micro-variations in soils or topography.

The irregularity of tree growth was reflected in the wide variation in production from block to block. Production of cocoa had commenced at Ononda almost exactly four years from the inception of the scheme. Many blockholders had not, in August 1964, started to pick their cocoa but others were already harvesting regularly and systematically. No attempt had yet been made to establish a co-operative fermentary on the site provided. Instead,
[439] the Popondetta Cocoa Fermentary Pty Ltd made a monthly trip to
[435] collect wet beans from Ononda and two other centres. The price in August 1964 for wet beans at the fermentary was 5½ d. per pound. The price paid at the villages was 3 d. per pound, 2½ d. per pound being deducted for collection expenses.

[434] Cash income earned by the Yega from cocoa was still very small. Work time expended by Yega villagers varied widely. In a few instances pods were picked the previous day but most people picked and opened pods on the morning of the collection. Pods were opened under the trees on the blocks; the wet beans were then carried in cooking pots, basins or sacks about half a mile to the collection

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178 point at Ononda bridge. Production details for the two occasions observed are given in Table 1.

Table 1

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434 Yega Scheme cocoa production and growers' income on two occasions

Name	Picking of 1 July 1964				Picking of 29 July 1964			
	Picking	Pods*	Net wt. lbs.	Amount received $	Picking	Pods*	Net wt. lbs.	Amount received $
Wilfred	3rd	86	16	0.40	4th	?	5	0.12
Timothy	3rd	810	143	3.58				
Dick Shepherd	3rd	519	116	2.90	4th	400	103	2.58
Ethelbert	2nd	205	45	1.12				
Livingstone	2nd	408	79	2.08				
Spencer	2nd	136	30	0.75				
Wilson	1st	123	21	0.52	2nd	34	3	0.08
Needham	1st	96	16	0.40				
Reginald	1st	62	18	0.45				
Roy	1st	14	3	0.08				
Geoffrey	1st	60	12	0.30				
Randolph	1st	36	8	0.20				
Hubert Murray	1st	176	30	0.75				
John Livingstone					3rd	?	50	1.25
Bruce**					?	250	56	1.40
Aubrey					3rd	103	27	0.68
Faithful					4th	410	83	2.08
Dewhurst					1st	50	9	0.22
Total		2,731	537	13.53		1,247	336	8.41

*Average 100 pods for 21 lbs wet beans; average beans per pod is 31 (count of 13 pods selected at random).
**Bapa man, not member of Yega Scheme.

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178 ## Incentives and income distribution

The Yega Scheme provided the middle-aged men in particular with an opportunity to increase their incomes. The younger Yega men working for wages away from the village were not attracted back home by the prospects of cash crop planting. Only one unmarried man left his job (in the police force) to return home and obtain a block in the scheme.

Work patterns

Traditionally among the Yega members of one lineage worked together to clear the forest in preparation for planting food gardens. The cleared patch was subdivided among those who helped with the work. Planting and caring for the growing crop was the responsibility of the individual and his family. This traditional pattern was modified when clearing rain forest for the Yega Scheme when the able-bodied men of all lineages worked together. The cleared blocks were then allocated by ballot and the individual concerned was responsible for planting shade trees, laying out a seed bed, planting out the young cocoa trees, 'lifting' shade as the trees increased in size, and keeping down the weed growth. In most instances, relatives who helped the blockholder with these tasks were compensated. For example, the cocoa pickings on 29 July (see Table 1) by Aubrey and John Livingstone were made from the same blocks as those by Ethelbert and Livingstone on 1 July. Aubrey is a member of the same lineage as Ethelbert and John Livingstone is a son of Livingstone. As part payment for work done previously on the blocks these two men were permitted by the blockholders to harvest one month's cocoa production. Other relatives who had helped with the work would be given a similar privilege.

Late in 1962 and early in 1963 many Yega moved their homes to the new villages of Ononda and Binjapada (see Table 5) [A], the reason given in every case being to live closer to their cash-crop areas. In January 1963, however, the move had not resulted in a significant increase in the amount of time spent on the cocoa blocks.[1] This was because of the time spent building their new houses. Only one man out of 12 spent any time working on his cocoa block during the period 14-28 January. The remainder divided their time about equally between building and work in their food gardens, which were scattered between the coast and the new cocoa blocks.

Several attempts were made to introduce communal labour into the production of cocoa. The first was organized by a blockholder, Wilfred Upena, early in 1963. He and 17 others belonging to five different Yega clans agreed to do a day's communal work clearing rain forest to extend each man's block in turn. As the originator of the scheme, Wilfred's turn was first and an acre of rain forest was cleared on his block on the first day. But on my return a year later no further communal work had been done by the group.

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[1] An unsupervised record of daily work was kept by a man living at Ononda from 14.1.63 to 28.1.63, but it was of only limited value.

A. [For Table 5, see Category 166, p. 43--Analyst]

Changes in the Yega settlement pattern after 1960

361 178 Influenced by rapid changes in land use, the location of Yega residences radically altered after 1950. Figs 1, 2 and 3 illustrate the evolution of settlement up till 1950. In 1950 the Yega lived in small villages spread along four miles of coastline. In 1952-3 occurred the major amalgamation of dwellings into Beporo [166] village already mentioned (p. 29). Members of all clans took part in this move. Although none of the other villages went out of existence at this time, all diminished in size while Beporo grew 161 rapidly. Table 4 shows the estimated distribution of population 162

[TEXT CONTINUED ON PAGE 42]

Table 4

Distribution of total Yega population by villages in 1960, 1962, and 1964

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	Village name	1960 estimated	1962 November	1964 July
A.	Coastal			
	Surilai	60	52	61
	Niniyanda	44	9	5
	Kanaunje	15	17	11
	Basabuga	17	19	14
	Tarebosusu	7	10	Nil
	Banumo	14	8	10
	Gombe	19	15	19
	Siumbago	9	13	Nil
	Beporo	335	275	164
	Gona Mission	7	6	18
	Subtotal	527	424	302
B.	Inland			
	Gatara	6	6	6
	Konje	Nil	6	97
	Otobejare	Nil	8	13
	Imangada	Nil	3	8
	Mumburada	Nil	17	47
	Ononda (D.A.S.F.)*	Nil	5	1
	Ononda	Nil	41	66
	Binjapada	Nil	51	61
	Jamberoda	Nil	Nil	15
	Subtotal	6	137	314
	Total	533	561	616

* Department of Agriculture, Stock and Fisheries indicated that these informants had made no attempt to build houses of their own but were using the facilities available at the D.A.S.F. Ononda settlement.

A. [For figs. 1, 2, & 3, see Category 361, p. 41--Analyst]

Figure 1

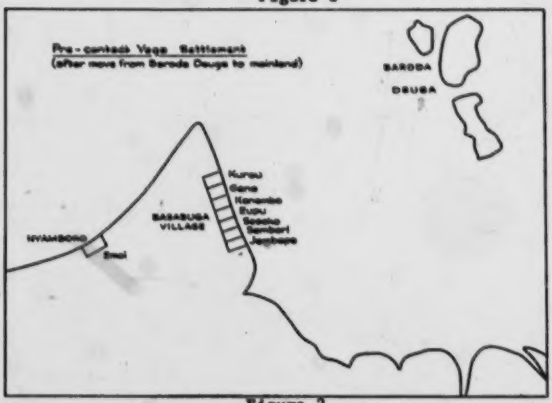

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Figure 2

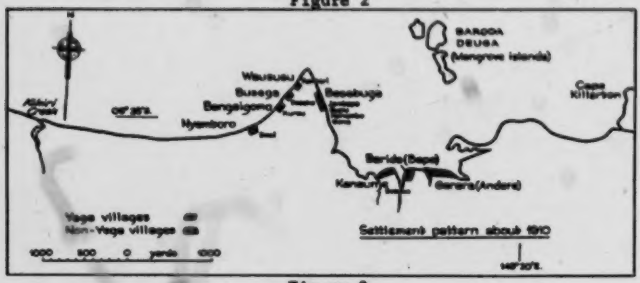
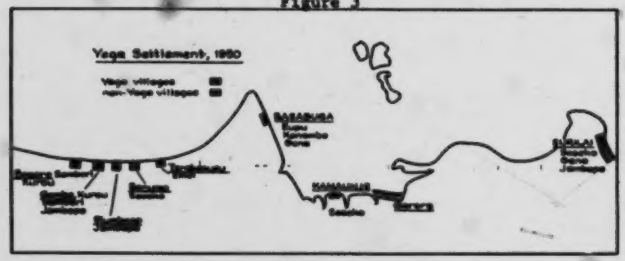


Figure 3



361 166 followed by the holders of blocks 14, 18 and 46.[1] In the development of the new settlement pattern at Binjapada, the existence of an elongated grassland area lying roughly parallel to the cocoa blocks cannot be ignored. The absence of such a grassland area in the vicinity of the western section of the cocoa blocks was one of the main reasons why no similar 'shoestring' village developed there. Holders of blocks in the western section built their new homes either in the village of Ononda or in smaller hamlets beside the Gona-Popondetta road at distances up to two miles from their blocks. Those who built in Ononda were in general men with no previous cultivation rights to garden land close to the cocoa blocks. After establishing their homes in Ononda village most of these villagers cleared rain forest in the Ononda area, thus establishing their cultivation rights to nearby areas of land. 361 166 241 423 Villagers who established new homes along the road, on the other hand, in most instances built upon or near to land over which they possessed cultivation rights. To the men in this group, proximity to food gardens was a powerful subsidiary reason for moving inland.

Extension of the Yega Scheme

● 178 245 The foregoing description shows that the Yega Scheme was a major factor in recent changes in Yega land use, land tenure, cash income, work organization and place of residence. The process begun by the Yega Scheme generated further change, particularly amongst those Yega who did not obtain cocoa blocks at Ononda.

245 In February 1963 many Yega were disappointed because they had no individual area of cocoa. It had already become apparent to most of them that a half or quarter share in the block of a relative would return them very little income; all those who had missed allocation of one of the Ononda blocks were, therefore, very eager to clear a further block. Clearing did, in fact, begin on a new block parallel to and south of the Ononda block, the week the author left the area in mid-February 1963. However, very soon after this, the Yega organizer of cocoa planting, Napoleon Aiga, was posted by D.A.S.F. to another district, and instead of continuing with another 'block' development, people began clearing and planting in scattered blocks. Seven blocks totalling about eight acres were planted in this manner. Several aspects of these plantings require comment.

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[1] According to the author's rough pace and compass traverses, two of these men had in fact built their dwellings on neighbouring blocks. Accurate surveys were therefore needed in order to avoid future difficulties.

245 Work on this scheme had not progressed far at the time of observa-
472 tion because of unseasonable weather. Underbrush and small trees had been cut by each individual on his block but it was decided to wait for dry weather before cutting the big trees by communal effort. All Yega would then be invited to help and helpers would be recompensed after the clearing of each block by a feast given by the blockholder and his family.

245 As with the Yega Scheme, the advice and help of Agricultural
[242] Extension Service officers was requested and given. The site was inspected and soil suitability evaluated before the Yega started
[484] clearing. However, although the layout of the Berojou blocks closely resembled the Ononda blocks, they are half an hour's walk
[487] along narrow footpaths from the Gona-Popondetta road, the only vehicular road in the area.

245 The people concerned in the scheme lived in various places.
36 Most lived in the Konje area, one at Mumburada, one at Gatara,
166 while eight lived in Beporo and one further away at Gombe. However, it was likely that the Beporo and Gombe people would move inland in the near future. There was at the time no talk of moving home sites to the new cocoa blocks at Berojou.

Conclusions

241 The clearing of rain forest for planting blocks with permanent
245 tree crops whose produce was to be sold for cash was a radical
178 departure from traditional Yega land usage. The Yega Scheme in-
423 corporated traditional principles of land tenure and work organization with modifications to meet the changed circumstances of today. Features deriving from traditional precedents were:

[476] [464] (i) the use of communal labour to clear the forest, and the subdivision of the cleared area among those who helped in the work;

(ii) the absence of any documentary record of the transference of rights to individual right holders (although this was later provided under new legislation);

[464] (iii) the organization of group labour for certain tasks even though recruitment of members might not necessarily be based on purely traditional criteria;

245 (continued)
413 planted, in one case the wife was, in one case the father's sister's
17 husband, in another the half-brother by a different father and in
19 the last case, the father of a half-brother.
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[423] (iv) the strong desire of individual members of extended families each to have personal control of a piece of land and of useful trees on that land.

The aspects which had little precedent in traditional custom were

(i) the systematic layout of blocks;

[433] (ii) the production of crops for sale;

[242] (iii) the supervision and guidance of Agricultural Extension officers and workers, most of whom had no kinship ties with the Yega;

[361] (iv) the provision for the location of a blockholder's dwelling on the block itself rather than in a village.

The value of the Yega Scheme is this combination of old and new which was achieved by basing the scheme on traditional precedents in so far as they were appropriate and incorporating innovations where necessary. The main innovations were organizational and technological - involving new crops, new husbandry techniques, new processing methods and equipment. There was an increase in some forms of group activity, for example bush clearing by all the Yega (whereas bush clearing was traditionally carried out by sub-clan groups), and the proposed co-operative fermentary and marketing facilities. On the other hand, a greater dispersal of residence and the adoption of new mores were responsible for some diminution of traditional forms of group activity. In pre-contact times the family was the basic unit for garden work but larger groups formed for other activities. With the addition of cash crops, agricultural work took more time and many of the larger groups for fishing and social activities atrophied.

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423 The rights of the individual in cash cropping land will become more marked in relation to those of the sub-clan and tribe. Whereas food gardens were held by individuals or small descent groups and rights at this level were flexible due to rapid demographic changes and the system of land rotation, cocoa is a relatively permanent crop and the planter is associated all his life with the land on which the trees are planted. With change in the legal status of the land the rights of the social group to the cash crop lands are certain to diminish in favour of individual rights.

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[423] The new pattern of residence, showing tendencies towards 'ribbon' development and particularly towards the dispersal of homesteads, varied markedly from the traditional form. Most significant of all variations from tradition was the location of homesteads by individuals on potential extensions to their cocoa blocks. With the registration of individual title to these lands it seems likely that this trend will continue. If the trend towards dispersion

continues, a pattern of farmsteads set in consolidated, individual holdings may well replace today's villages and hamlets with their fragmented, widely-scattered landholdings. 361 178

Acknowledgments

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Introduction

Since the end of World War II there has been a rapid development of co-operative marketing and retailing and in some cases production amongst the indigenous people of Papua.

This paper describes the origin of the co-operative movement in the Northern District and its subsequent development and modification particularly as applied to Yega.[1] The Yega were one of the first groups to organize a producers' co-operative, under the guidance of the local Anglican Mission. The movement rapidly extended to other groups of Orokaiva.

The development of agricultural co-operatives

As early as 1940 the Reverend James Benson of the Anglican Mission at Gona had begun to preach the virtues of co-operation. Benson was imprisoned by the Japanese but returned to Gona in 1946. The first mention of any co-operative in the district comes as a brief entry in his diary on 6 October 1946, 'Foundation of Gona Public Trust' (G.P.T.). The functions of the G.P.T. are not clear beyond the fact that it was organized as a committee or board - entirely Papuan in composition, with Father Benson as advisor - aimed at investigating ways and means of improving standards of living.

One of the most dynamic and influential members of the G.P.T. committee was Samuel Ungega from Gombe village. He was a member

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[1] Acknowledgment is made to the following people who read this paper in draft and offered helpful criticism:
H.H. Jackman, Esq., Chief of Division (Business Training and Management), Department of Trade and Industry, Papua and New Guinea, formerly Registrar of Co-operative Societies (1960-2);
G. Morris, Esq., Kokopo, T.P.N.G., formerly Registrar of Co-operative Societies (1956-60);
Rev. J.L. Wardman, Mt Hawthorn, Western Australia, formerly Anglican missionary in charge at Gona (1953-61).

worked for eight. This became an important basis for resentment and discontent among the workers.

The arrival of Rev. Clint in 1948 ushered in a period of dynamic growth in the co-operative movement in the district. He had a deep interest in co-operatives, and had been associated in Australia with the Christian Socialist Movement. He was specifically recruited by the mission to organize agricultural co-operatives and within three weeks of his arrival he had held meetings with the members of three of the co-operatives and had discussed future development with the District Agricultural Officer, Mr Cockshott. In mid-May he commenced a weekly co-operatives instruction class covering co-operative leadership, history of co-operatives, basic techniques, book-keeping and English.

Rev. Clint was insistent that Christian ritual be associated with co-operative action. Educational and committee meetings always closed with a special prayer, there were church services at which tools were blessed and newly planted seed was blessed in the gardens. This aspect of the co-operative movement was regarded with some apprehension by Administration officers who felt that it could be misunderstood by the Papuans and possibly lead to the development of a cargo cult. There was some evidence to suggest that a cult did in fact begin. Money was collected surreptitiously (its disposal was never explained), and in the opinions of some observers there was a belief among some participants that the mere formation of co-operatives and the routine performance of the work required would magically raise the Papuans in a short time to the status of Europeans. On the other hand, there was evidence to support the view that the people in their desire to improve their economic position saw co-operatives as the channel and adopted the idea wholeheartedly. There is something of both these views in the statement of the ex-chairman, who said: 'We wanted to be like other civilized countries and earn money by working together.'

In November 1948 there were 25 acres under dry rice at Gona No.1, and 10 acres under taro, 6 acres of rice and one acre of peanuts at Gona No.2. Similar areas were under crop at the other co-operatives. The first harvest in early 1949 appears to have been a success. On his return from leave in March 1949, Rev. Benson spoke of 'barns and storehouses bursting with rice, people happily busy...true comradeship and Christian co-operation'.

In August 1949 the first four co-operatives in the Territory were registered.[1] They were, in order: Yega, Gona, Garara and

[1] This registration was made under the terms of draft legislation. It was not confirmed by the Registrar of Co-operatives under the finally approved legislation, the Co-operative Societies Ordinance 1950.

In pre-European times, according to present-day informants, the most important feasts held by the Orokaiva people were associated with initiation, marriage, death (though apparently not birth), and the enhancement of prestige. Feasts were also held to mark the transfer of land, the re-establishment of peace between persons who had been quarrelling, resumption of residence after a prolonged absence, and the lifting of prohibitions between a man and his mother-in-law.

It is impossible to know with any certainty the scale of feasting prior to European contact for, though a detailed study of these people was made in the late 1920s (Williams 1928 and 1930). Government patrols had brought tribal fighting to a halt some years before. It is therefore quite likely that, with less time taken up in warfare and greater freedom of movement assured, the feasts and ceremonies of that day were more elaborate than those of the pre-contact era.

While feasts are still held today, the relative emphasis given to each category has changed considerably. Feasts associated with initiation are held on a greatly reduced scale and often omitted altogether, but those relating to marriage and death remain important. The taro festivals, the main function of which appears to have been the enhancement of prestige, are still held in some places but have been abandoned in others. The other feasts listed above are still held occasionally, with the exception of those relating to the lifting of prohibitions in relation to mothers-in-law.[1]

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[1] Since the above was written, such a feast was held by a family from this village but now living on a government resettlement scheme about two miles away. The atypical circumstances of the new residence pattern may have caused the revival of the feast (known as peikari) because when the daughter of the settler married, the new husband was brought to live with them to help with cash cropping. This is contrary to the customary pattern of virilocal residence. Living in such close contact with his mother-in-law probably made the highly formalized relations between them difficult to maintain. The feast was thus invoked to sanction more relaxed relations between them.

On the other hand, some feasts held today have no precise traditional equivalent. These include those associated with festivals of the local church; those to farewell or welcome home children attending distant schools, migrant workers and others; those to mark the opening of new churches, schools and medical aid posts; and finally and most recently, feasts or 'parties' to celebrate the birthdays of favoured children. 574 178

A birthday feast held in Inonda village in July 1962 illustrates changes taking place in some of the social and economic values of the community, and persistence in others. The celebration was held to mark the birthdays of the two adopted children (actually the illegitimate issue of two daughters) of a prominent local citizen, a retired mission teacher. It was the first such party held in this village, though similar parties had been held in neighbouring villages. Several villagers mentioned that they intended holding birthday parties for their first-born children. The idea was introduced by indigenous mission teachers who have attended birthday parties held by their European counterparts. 574 561 [177]

Few Orokaiva people are aware of the birth dates of their children and those few who are derive some satisfaction from the fact. In this instance, the children whose birthdays were being celebrated were a boy aged nine and a girl aged one. The party was said to be for both children, though 'mainly for the boy'. Their actual birthdays were said to have been 18 and 22 June respectively, but the feast was not held until the following Saturday as several of the villagers and many of those invited from outside the village work during the week as labourers for the Public Works Department, for a local engineering contractor and for local European planters. Almost all feasts and ceremonies conducted in this village today are held on Saturdays.

The host (the adopted father of the children) is not engaged in paid work and he and his wife, assisted by their three married daughters, spent the two preceding days gathering food from the gardens. Two of the daughters live in the same village as their father and the other in a village about six miles away. As all the host's male relatives in this village were employed at the time, he sent for his brother's grandson, a single man in a village about fifteen miles away, to come and assist. A small platform and a leaf shelter were built outside the host's house: the former to serve food on and the latter as shade for the visitors. 574 [343]

Taro was the main food provided, and of an estimated total contribution of 383 pounds, 128 pounds were brought by the host and his wife, 105 pounds by their three married daughters, 70 pounds by two clanswomen of the host's wife, and 80 pounds by three clanswomen of the host's eldest daughter's husband. 574 431 602

504 The two latter contributions require further explanation. Of
431 the 70 pounds brought by the wife's kin, 40 pounds were given by
602 a parallel cousin whose husband recognized a distant relationship to the host, and who had worked as a mission teacher with him. The remaining 30 pounds were given by a clanswomen (whose exact relationship we did not determine) who lives in a village a few minutes' walk away, and who frequently visits the host's wife. This woman's husband recognizes a distant relationship to the host. Of that given by the daughter's husband's relatives, 60 pounds were contributed by a mother and daughter whose husband and father had spent his life as a work associate of the host in a neighbouring village. The remaining 20 pounds were brought by a clanswoman whose kinship link was reinforced by her residence in Inonda and her marriage to another relative of the host.

With the exception of taro supplied by the host and his wife jointly, all taro was brought by females. They were all kin of either the host, his wife or his eldest daughter's husband. But of the many relatives of these people resident in the vicinity, only five contributed. Three of these had work associations with the host and the other two had subsidiary kinship links to the wife as well as being coresident or nearly so, and enjoying frequent social interaction with the host and his wife.[1]

504 In former times, we were told, the men now engaged in paid work
178 would have gone hunting to obtain meat for a feast, and would have constructed more elaborate shelters and platforms as well as erecting poles for the stacking of food contributions in such a way that they could be measured and compared. The role of the men in the preparation of this feast was negligible by comparison.

504 The host intended to kill a domestic pig for the feast but it
431 escaped after being shot. A European contractor whose labourers had been invited to attend gave a pig which he had purchased for $30. The only other fresh meat was a large hornbill donated by the leader of the clan with which the eldest daughter's husband lived.[2] These two men have engaged in many exchanges over the past few years.

504 Of a total of $9.83 worth of store foods supplied, $2.60 worth were purchased by the host himself from his savings, $7.08 worth

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[1] In addition to the above food, the husband of a daughter of the host used the occasion to give a pig and vegetables to one of his wife's mother's clansmen who had not shared in the bride-wealth previously given by the husband for his wife. The gift was taken back to the donee clansman's village for distribution.

[2] This man does not live with his own clan, but with that of his classificatory brother's wife.

by the eldest daughter's husband from his current earnings, and $0.20 worth by the husband of another of the host's daughters from his current earnings. The only other foods contributed were three bunches of bananas and sixteen lengths of sugar cane by the host and four bunches of betel nut and one bundle of betel pepper by the eldest daughter's husband and his son. 574

It is apparent that the men's traditional role of supplying fresh meat is being replaced by an obligation to supply store foods. In addition, informants confirmed that the range of men participating in the contributions had decreased markedly. The reason for the large donation of store foods and betel nut by the eldest daughter's husband was that as his family had all been killed and his property destroyed in the Mt Lamington eruption, he had not paid any bride-wealth at the time of his marriage. 574 N8

A blackboard was displayed bearing a notice to the effect that all persons who were in receipt of wages were expected to contribute fifty cents and all others twenty cents. The host sat at the end of the food table and collected the cash (while a research assistant recorded the details of contributions and contributors). While most visitors expected as a matter of course to make some offering, they were not prepared for a fixed fee. There was therefore some delay and it was not until it was announced that those who did not have the full amount could contribute whatever they had that the people could be persuaded to make their contributions and partake of the food. Over half of those present had no money and consequently refrained from eating, though some close relatives who did not contribute were fed in the background. Several visitors privately expressed resentment at being asked for a money contribution.[1] 574 431 [126]

Contributions were received from 64 persons and ranged from eight cents to a dollar. Of a total of $12.15 received we were able to account for $10.88. Those who had brought food did not bring money with the exception of the labourers from the contractor's camp on whose behalf their employer had contributed a pig, and the husband of one of the host's daughters (who had given twenty cents worth of food) who gave ten cents in cash. Over half the money ($5.78) came from 31 persons who had no kinship ties with this village but were employees of European planters and of a contractor in the area or were indigenous settlers from a government resettlement scheme nearby. Of the balance, $2.10 was given by 15 relatives of the host from three different villages and

[1] The labourers and settlers had been specifically invited to attend, but I am not aware of the extent of invitations sent to other villages.

£2.90 by 16 relatives of the host's eldest daughter's husband (the one who had not been able to pay bride-wealth at the time of his marriage).[1] The latter 16 relatives came from four different villages. All but one of the total of 64 contributors of cash came from villages other than Inonda.

Contributors came from eight different localities within a range of 16 miles. There were also approximately 70 other adults who attended but did not eat or contribute. Some were from this village but the majority came from other villages in the vicinity. There were also some 30 or so children present who were not included above.

The majority of the persons present attended because of their residence in neighbouring communities and claimed no kinship links with the hosts. In earlier times, informants say, it would have been unusual for persons to attend a feast unless they were linked to the hosts by ties of kinship, marriage, or residence in the same village. Moreover, they claim, even in pre-war days it was unusual for persons from so far afield to attend a relatively small personal feast. Cash payment, it appears, is becoming an acceptable substitute for kinship links as a qualification to attend certain ceremonies.

Transfers of property at this feast differed markedly from those in feasts of the traditional type. Firstly, the food was contributed by a more restricted group, and was consumed not by all, but only by those who paid. Secondly, cash was given in place of traditional valuables (feather head-dresses, shells, arm-bands, necklaces, etc.); and thirdly, there was no reciprocal exchange for the whole of the cash was retained by the host who apparently does not acknowledge any obligation to give reciprocal help to those who brought cash, though he does recognize such an obligation to those who brought food.

In this village many of the older people wear only loin cloths made of tapa, but at the feast all but four men wore imported clothing. The four who did not were older men who remained in the shadows. A few men wore cotton lap-laps, but the majority wore short trousers. All but three wore shirts - an item of clothing that is rarely seen in the village. Quite a number wore plastic sandals, though the majority were barefooted. All the women wore cotton skirts and blouses, though in their daily work an in festivals of the traditional type they almost never wear any garment above the waist. Four young men were daubed with face powder and one wore a spring of leaves in his hair. There were no other personal adornments. At taro festivals today, and at marriages, funerals and

[1] See p.74.

even have been sufficient qualification for admission to a group, but without precise and comprehensive genealogical information this cannot be asserted. It is possible, for example, that some households could trace approximately equivalent but very distant genealogical relationships to both bride and groom, and that place of residence then determined the group with which they were aligned. 583 621

Williams (1930:137) describes a marriage payment typical of the mid-1920s. It included no cash and the traditional valuable would have been worth only $10.00 at 1962 prices. The traditional valuables in the bride-wealth described here were worth about three times as much and in addition $80.00 in cash was included. The people clearly regarded the cash as the most important component. Those genealogically and residentially closest to the groom contributed most cash; there was considerable formality associated with the payment of it; and in discussions of the bride-wealth the dominant topic was the cash component. The bride's father and brother received most of the cash but only a small proportion of the traditional valuables and they showed little interest in the latter. Households with lesser claims generally received items other than cash. The importance of traditional valuables in marriage payments has therefore declined markedly as a result of the introduction of cash to the economy. 583 437 178

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461 apply only to activities which are traditional or local. They do not apply with the same intensity to wage labour outside the village.(1) If major increases in cash cropping were to eventuate the amount of time now spent in festivities would need to be reduced or, alternatively, bought foods would need to be substituted for garden crops at feast times.

Other limiting factors

241 Income: Past experience has made people cautious about the prospects for their present cash crops. They are aware of the failure of the attempt to establish oil palms as a cash crop in the 1920's, of the abortive sugar project of the early 1930's, of the compulsory planting of coffee in the same decade and the subsequent collapse of the coffee market with the outbreak of war, and of the introduction and failure of rice cultivation in 1948-49. Some are aware too of the collapse of the peanut market within two years of the introduction of peanuts as a plantation crop in 1957. It was not, however, tried as a village crop on any significant scale. Though the people are not aware of the precarious state of the world market for coffee and cocoa today, they are aware of the price decreases over recent years.

245 434 Income from cash crops is not only uncertain, it is quite small and the people derive much less income from their coffee than they expected. This is due in part to unrealistic expectations, but also to decreases in price between the time of planting and the present,(2) and to inadequate knowledge of coffee husbandry. In the village context it is unlikely that the average man could, after meeting his family's subsistence needs and social commitments, clear and maintain more than two and a

[196] [198]

(1) We are nevertheless informed by many Orokaiva people that the number and duration of traditional ceremonies and the number of people participating in them have all decreased markedly during recent years. They have been replaced to some extent by church festivals and sports but these activities are said to take much less time. This view is confirmed by comparing the social activities of today with those described by Williams, 1928 and 1930. The period of mourning after death has in particular been reduced and now involves fewer people.

[435] (2) The cash price per pound paid to the grower was 2/- in 1959, 1/6 in the early part of 1960 and 1/2 in the later part, and 1/- in 1961-2. The price at present being paid is 11½d. per lb.

571 against sickness, crop failure and other catastrophes. The mutual
[602] obligation system which operates among kinsmen 'acts as a man's
[182] trade union, his friendly or benefit society, his slate club and his orphanage; it takes the place for him of health insurance, and if needs be provides for his funeral' (Lawrence 1964:34).

121 If it is hoped to set up individual farmers independent of their kinsmen some substitute must be found for the traditional method of social insurance. For as Fisk (1961:777) has pointed out, 'in an underdeveloped country...ready and prompt access to assistance in time of need is a variable of considerable importance to the settler'. Attempts to break down traditional obligation patterns by individualisation of tenure have often met with little success. In Egypt (see Gadalla 1962:80) and in various parts of the Pacific (Crocombe 1964b:127 and 1965:15) land registration schemes designed to result in individual tenure have failed to achieve individual ownership and use of land.

476 There are indications that traditional obligation patterns may
571 be continuing at Ombi-Tara since tenure conversion was introduced.
178 Blocks were cleared by kin groups in accordance with custom. Two
[689] men mentioned that there had been an arrangement whereby if a person worked on the block of another man but the second man did not reciprocate, he would have to pay the first man 80 cents. However, both people said that no one had had to pay it. Two men who were working for wages on road maintenance near Ombi village bought food from the nearby store for those who helped clear their blocks. Five people claimed that they had helped clear other people's blocks but had not received any assistance in return. Everyone who was questioned said that no new obligations had been established by the process of clearing but this may be open to question.

423 It has already been mentioned that conversion involved substan-
657 tial redistribution and equalisation of right holdings. Whether obligation to the 'donors' will be established as a result is a matter for future observation.

The blocks of three of the four absentee blockholders were being cleared and planted by kinsmen. The block of the fourth absentee had not been cleared at the time of our stay. It is likely that some obligations will be established by this assistance.

Two families are living in houses constructed on the block of another man; and several people have cocoa, coffee or bush rubber trees growing on blocks held by other people. These situations are discussed on p.29 below. A

The Ombi man who moved to his block to protect his taro from the sorcery of another villager replanted some of his taro on the block of a kinsman, for further protection. This was the only reported case of a person planting crops on the block of another

A [See Category 425--Analyst]

657 man since tenure conversion was introduced. It suggests that in
423 situations of stress, as when sorcery is feared, traditional tenure patterns may take precedence over the newly introduced system.

Several people mentioned that they will in future share the proceeds from their rubber with non-blockholding kinsmen, but most said they would not.

Inheritance of converted land

657 In law blockholders may depart from the traditional pattern of
423 inheritance when disposing of their land. As far as could be
428 ascertained, most of the Ombi-Tara people wish to continue the traditional Orokaiva inheritance pattern, under which the first
[178] son generally has some precedence. The first son is not, however, the sole owner but rather the nominal trustee of the land for all sons. If the landowner has no sons, his daughters may keep the land in trust for their sons and in some cases the daughter's husband may also acquire some rights.

Several people intend to pass their blocks to the first son only and expect any other sons either to take up another block on what is now clan land, or to gain wage employment in an urban area.

Work organisation

657 The time spent in Ombi was too short to enable any conclusions
423 to be drawn about the effects of conversion on work organisation,
182 but a few general points may be made. There was no set routine in
512 the sense of particular days being set aside for particular kinds of work. A number of people reported that Wednesdays and Fridays are set aside for Mission and Council work when required. During our stay no Mission work was done and Council work was done only on the first Friday, when most of the men went to a village two miles away to cut the grass around the Administration school, due to open the following week. Gambling occupied many people for much of Saturday and Sunday but others carried out normal work in the gardens on these days.

657 Husbands and wives worked together on food and cash crops, but
423 I am unable to estimate whether husbands work more on cash crops
182 and wives more on food crops as has been observed at times elsewhere.

[462] Five men were employed on maintenance work on the Popondetta-
[464] Kokoda road near Ombi for the full period of our stay, receiving
[465] $6.42 a fortnight. The need for cash to pay the Council tax and the Mission jubilee contribution led five others to work on road maintenance during the final week of our stay. Although working a thirty to forty hour week, the five longer term roadworkers have planted an average of 410 rubber seedlings each which is greater than the average of 346 seedlings for all Ombi-Tara blockholders.

Chapter 5

Summary and conclusions

657 423 Current Administration land policy aims at the introduction throughout Papua-New Guinea of a single system of land holding under secure individual, registered title, and the promotion of indigenous agricultural development.

Land tenure conversion has been confined to the Northern District of Papua where it is at present costing the Administration about $116 per block or $6 per acre. This estimate includes the cost of providing salaries, staff housing, stationery, and office facilities, and excludes provision of planting materials, field equipment and extension services. There appears to be some scope for simplifying and reducing the costs of tenure conversion. The costs of tenure conversion should be compared with the costs of other methods of promoting indigenous agricultural development, for example land resettlement schemes, in order to determine which methods are most economical of public funds.

To what extent are the two aims of the tenure conversion legislation being achieved at the Ombi-Tara conversion scheme?

Individualisation of tenure

(178) Land rights at Ombi-Tara were traditionally held both by individuals and by groups. There are several indications that the de facto tenure system introduced since tenure conversion may be little different in some important respects from traditional tenure arrangements.

[428] (i) The Ombi-Tara people intend to continue traditional inheritance patterns (with some modifications) in future, and this may lead, as it has in other Pacific countries, to several persons holding de facto rights in a block of land which is considered in law to belong to a single individual.

[476] (ii) It appears unlikely that traditional Ombi-Tara obligation patterns will be broken down by tenure conversion since the obligation system provides the main means of social security for the villager.

657 423 (iii) As was the case before conversion, a man whose crops stand on another man's land retains his rights to those crops (in the local view, but not in law).

[425] (iv) As was the case before conversion, each man is considered by the villagers (but not in law) to have the right to extend his planting behind his present holding without consulting the clan leader or other members of the clan.

(v) It remains to be seen whether all villagers fully understand that all previously existing rights to land have been abolished since conversion, and whether in future some people may make claims on the basis of such rights.

[361] [198] (vi) Residence patterns appear also to be in accordance with traditional custom as those people who have left the village are living in hamlets composed of kinship groups and not as single farmers each on his own block.

Promotion of agricultural development

657 423 182 433 Even if tenure conversion alters the tenure system less radically than expected, it is still possible that it may act as a stimulus to indigenous agricultural development. The acreage under cash crops and labour productivity has increased at Ombi-Tara since tenure conversion was introduced. The improvement seems to be due more to the benefits arising from the consolidation of fragmented holdings than to increased security of tenure since the land rights that Ombi-Tara people held before conversion were sufficiently secure to allow them to plant cash crops.

Consolidation of holdings has reduced the labour inputs required to establish cash crop gardens by reducing the time spent travelling between the village and food and cash crop plots. Whereas previously each man had relatively small areas of land on each plot, making extension of plantings difficult, all his land has now been brought together on one twenty acre block. The provision of easy access to all blocks has facilitated interpersonal co-operation particularly in clearing bush lands, and has enabled officers of the Department of Agriculture to supervise planting, pest control and general crop maintenance more efficiently. This increased assistance from the Department of Agriculture has played an important role in increasing the acreage under cash crops by providing essential technical and managerial skills. It is questionable whether conversion would have led to a greatly improved cash cropping performance if it were not accompanied by increased agricultural assistance.

Tenure conversion appears likely to enable economies of scale to be gained in processing, transporting and marketing of produce when the Ombi-Tara rubber trees come into production, thereby increasing labour productivity still further.

a Land Titles Commissioner today has the difficult task of adjudicating the rival claims of two or more groups to the same areas of forest land; each group can, moreover, produce men who can point out the trees marked by their ancestors and each group is convinced that they alone are in the right and the others merely conniving liars, who will use any methods to steal the land. The intensity of feeling which people generate over land became evident one day when I attended a meeting called by the Land Titles Commissioner to discuss rights to a small area between the Yega and a neighbouring parish. As my Yega friends and I left at the conclusion of the meeting we came on a group of Yega men in the bush fifty yards from the meeting site; they had prepared a supply of sharpened 8 foot poles 'just in case', they said, 'the others started a fight over the land!' Doubtless the other side was similarly prepared.

The Yega parish is composed of eight named, exogamous, localised clans most of which are divided into sub-clans and lineages; descent is patrilineal. On marriage, a girl leaves her father's house and goes to live in the house provided by her husband; in past times the couple invariably went to live in the same village as the husband's father, but nowadays the rules have been greatly relaxed. Each clan has a different totemic emblem which serves as a kind of trademark. If the totem is an animal or edible plant it may not be eaten for food.

An abbreviated table illustrating the Yega social structure is given in Table 1.

[P.6-8]

353 *tapa* cloths, also worn on ceremonial occa-
[415] sions; often nowadays mother's best dress and father's best shorts and shirt are also kept in this box. Everyday tools—fishing spears, pig spear, bush knife, and axe—are stored between the floor joists under the floor platform. A
[302] bundle of dry firewood may be stored under
[227] the house in case of a prolonged spell of wet weather. The dwelling of each clan fishing-leader is easily recognized by the large seine net hung to dry under the eaves or rolled in a corner of the verandah.

342 The Yega build one other form of dwelling, a garden shelter (*dobo*) usually roughly constructed with leaf walls, frequently open at one end and often so low from floor to roof that a person cannot stand erect in it. A *dobo* is a temporary dwelling, built near the swidden in current use, and used by a man and his family for up to a week at a time while they are working in their gardens, which may be three or four miles from the village. The *dobo* is also used to shelter from rain or to take a siesta during shorter, one-day visits to the garden.

343 A *gaga* is simply a talking platform where
[461] men sit for a chat, a chew (of betelnut) or a
[614] smoke during siesta time, or after the day's work is done. There is usually at least one *gaga* for each clan in a village. The *gaga* per-
[627] forms an important social function for it is
[584] here that quarrels are settled, marriages arranged, and the everyday problems and business of the village discussed and finalised.

291 Everyday clothing is a pair of shorts and maybe a shirt or a singlet for boys and men, and a cotton dress or skirt for girls and women.
[287] The traditional body covering for both men and women was beaten out bark-cloth of the
[191] paper mulberry tree. This is used throughout the Pacific and is known as *tapa*. *Tapa* skirts and loin cloths are still worn on special occasions, such as weddings and New Year sing-sings, while many older people wear *tapa* to
323 church on Sundays. The Yega and their neigh-
[289] bours are expert tapa-makers but they did not have either the suitable clay or the art of pot-
439 making. They used to trade their *tapa* for pots from Ambasi, thirty miles to the north, and
[198] from Wanigela, 100 miles to the south. This trade has now declined because everybody can

[P 11-A]

[TEXT CONTINUED ON PAGE 12-A]

buy cheap cloth and durable iron or aluminium pots at the trade stores. Although every housewife now has two or three large manufactured pots, she keeps them for cooking the food for feasts. Most of the daily meals are still prepared in clay pots but few of these pots were obtained by the old barter methods; most were obtained as gifts from friends or relatives. At one wedding, for example, the bride received fourteen clay cooking pots, in addition to a large supply of mats, string bags, enamel plates, and dishes: enough to last for years to come.

ECONOMIC CHANGE AND THE PATTERN OF SETTLEMENT

A very close relationship existi between economic change, particularly the planting of cash crops, and changes in the pattern of settlement. Although most development has occurred in the last twenty years, there is evidence, supported by the oral traditions of Yega elders, to show that some evolution of settlement had occurred even before the first contact with white men. By tradition the Yega were sea people. This probably means that they arrived as migrants and originally spent most of their time aboard their canoes and lived mainly upon seafood. They settled first on three small islands, Baroda Deuga, about half a mile north-east of Waususu Point (Fig. 9). These islands are today only a few feet above high tide and are composed entirely of coarse

[P.12-A]

The new village sites also reduced walking time to the gardens.

The war of 1939-1945 affected the Yega in several important ways. Their territory became one of the major battlefields of the Pacific War. Every person migrated from the area with the exception of one old crippled woman who somehow managed to survive for eighteen months in the bush. Almost all able-bodied men served in the army or labour corps and the women and children lived at another Anglican mission about thirty miles to the north. When they returned, they found all buildings, and any belongings that they had left behind, destroyed and most of their coconut palms cut down or damaged by gunfire. There were some compensations. The Australian Government paid thousands of dollars in war-damage compensation for all trees and property but, more important, the stimulus of travel, and meeting and working with Australian and American soldiers, gave the younger men in particular a broader view of life which triggered off changes in their traditional economy. In addition, the transfer of the Administrative headquarters from Buna to Higaturu resulted in the construction of a major road to the port of Cape Killerton and brought the Yega into closer touch with the outside world than ever before. As a result, between 1945 and 1950, about twenty families left their re-built villages and moved east to found the new village of Surilai at Cape Killerton (Fig. 9). Men living at Surilai have since found regular employment on the Government wharf at Cape Killerton.

Major post-war changes in the Yega economy have resulted from their attempts to increase their cash earnings. Before the war many men worked as indentured labourers on plantations or on the wharves at Port Moresby

(P. 13-A) [TEXT CONTINUED ON PAGE 14-B]

178 and Samarai. They were away from home for
433 two years at a time and were not accompanied
464 by their wives and children. Since the war they
466 have not returned to indentured labour but
have tried other ways of earning money.

494 The first such experiment was an agricul-
241 tural co-operative, originated by a returned
soldier who got the idea from one of his
177 wartime Australian friends. Anglican Mis-
199 sionaries sponsored and directed the scheme
and some money was made from cash crops
of sweet potatoes, peanuts, and rice. However,
when the money was shared amongst all those
participating, it was a very small return for
the amount of work and there was widespread
dissatisfaction. The scheme was finally doomed
to failure by two events—the permanent re-
turn to Australia of the mission organiser in
January 1950, and the death of the Yega leader
in the Mt Lamington volcanic eruption in
[P.14-B]

245 By a fortuitous circumstance, the land selec-
423 ted was regarded by all Yega as communal
hunting land. It had belonged in the past to
[614] the Bowori clan, but when they were wiped
out in inter-parish warfare it had never been
[726] re-allocated among the remaining clans. No-
body, therefore, had to be compensated for
245 the loss. The Yega followed the DAO's advice
654 and over the next two years cut down a large
657 area of forest and planted shade trees and
young cocoa. In order to supervise this work,
the Agriculture Department built a small
village at Ononda to house a field instructor
and a group of trainees.

245 Many people came to believe that their
433 future prosperity lay in the development of
cash cropping. As the cocoa blocks were a long
361 walk (four miles) from their homes in Beporo
245 village, many decided to move inland; this
was a rational decision. An additional incen-
[484] tive was the development of the weekly market
[443] at Popondetta. With the rapid growth of the
town since 1960 there has been an increasing
361 demand for fresh fruit and vegetables. Many
443 Yega have taken advantage of this to sell sur-
438 plus produce for cash. Residence in the inland
settlements reduces the distance from the mar-
ket. By 1964, over half the population was
living in the new villages.

361 In addition to the dispersal of population,
the breakdown of traditional clan groupings
178 continued. The inland settlements are all
614 numerically smaller than Beporo and in all of
them the old homogeneity of clan membership
has disappeared. A man chose his house site
for convenience and access to his place of
work, rather than on the basis of his kinship
ties.

361 The most radical change occurred in the
establishment of Binjapada village. It is a
collection of fourteen households, spread for
over half a mile, along a narrow strip of grass-
361 land. Six of the occupants had been allocated
423 cocoa blocks in the near vicinity and four of
these men attempted to locate their houses on
the projected extensions of their cocoa blocks;
this represents the beginning of a dispersed
pattern of settlement foreign to the Yega tradi-
tion of clan-based clusters of dwellings. As no
boundary surveys were carried out, one man
located his house on his neighbour's block.
[P. 15-B]

361 He has now cleared bush and planted gardens
423 all round and claims, by right of usage, a much larger area than was originally allocated to him. The establishment of freehold title must reinforce dispersal, so it is significant that in August 1964 seventeen Yega cocoa-block holders were among the first people in New Guinea to apply for freehold title. The parish elders did not oppose these applications.

245 Yega expectations in cocoa plantings as a
458 source of cash income have not been fulfilled. The trees began to bear in mid-1964, at a time when, unfortunately, the world market was
[439] depressed. Growers received only three cents per pound for wet beans from a European-managed fermentary near Popondetta; by mid-1965 the price had fallen even lower, to two
245 cents per pound. The discouraging effect of
433 such prices was reflected in the low production of cocoa during the latter half of 1966, when forty-eight growers produced only 1,866 pounds of wet beans valued at $74.64, an average of under $2 per head. By January 1967, the well-cared for plantations of 1964 looked overgrown and neglected and it was obvious that apathy had replaced the early enthusiasm.

245 The Yega cocoa-growing scheme outlined
178 above well illustrates the conflicting traditional and modern socio-economic attitudes commonly found in New Guinea today. Tradi-
245 tional aspects are:
178
423 a) The use of communal labour to clear the rain forest and the subdivision of the area among those who helped.
464 b) The absence of any documentary record
[476] of the transference of cultivation rights to individuals.

c) The organization of group labour for certain tasks—individual right-holders to cocoa blocks were assisted by their kin in tasks such as cutting grass and opening the cocoa pods—and the subsequent obligation on the right-holder to repay such work by sharing his profits.

d) Personal control by each individual of the economic trees which he planted on his block.

245 Aspects which have little precedent in tradi-
177 tional custom but result rather from the acceptance of new principles are:

a) The systematic layout of blocks.

[P.16-A]

245
177 b) The production of crops specifically for sale.

[654] c) The acceptance by the indigenes of
[650] supervision and advice from European and indigenous members of the Agriculture Department: people with whom they had no kinship ties.

[423] d) The location of houses on the blocks.
e) The registration, by some individuals, of freehold title.

245 It is unfortunate that the scheme which appeared so successful in its early stages should have failed largely because of circumstances outside of the people's control.

464 Many Yega have made no attempt to earn
[434] cash from commercial agriculture. From the time of earliest contact with Europeans some
[166] of them have left home to work for wages. At the present time, almost one third of them are absent working, studying, or as dependents.

464 Forty-four per cent of all Yega men are away
178 working. Those who are married are accompanied in almost every instance by their wives
592 and children. This situation represents a
166 marked change from the pre-1940 years when many Yega men worked as indentured or casual labourers and could not take their dependents with them. Nowadays most Yega
[466] work in semi-skilled or skilled occupations in which family accommodation is often provided by employers. Even if accommodation is not supplied, the breadwinner's earnings are apparently adequate to provide living quarters for his wife and children; frequently town accommodation is of poor standard but evidently family life is preferred to separation.

871 The main factor in the marked improve-
178 ment in skills is education. The educational opportunities which have been available to the Yega for nearly fifty years have been exceptionally favourable, when compared with
[797] those of most other New Guineans. A mission school has operated in the area since 1909; since 1932 (except for war years) it has had at least one European teacher permanently on
[464] the staff. This educational background has enabled the younger generation of Yega men to take advantage of opportunities for employment in posts of responsibility and higher income which have become available in increasing numbers during the post-war period.

[P16-B]

434 home in the villages. By doing this, they are
431 bringing about changes in the established
176 rules of leadership in village life. Under tradi-
554 tional custom, improvement in status was
associated with the ceremonial distribution of
goods: the recipients were placed under obli-
gation to repay in similar kind at some future
date, or else lose status. Among the Yega, the
older recipients of gifts in cash or manufac-
tured goods find it impossible to repay such
gifts. As a result there has been an increase
in the prestige of young or middle-aged, edu-
cated men. An instance of this trend was the
[666] almost unanimous election, in 1964, of such
[659] a person, recently returned from paid employ-
ment, as the Yega's first councillor on the Oro
Bay Local Government Council.

(P.17-B)

48

Section 3: Other Contacts Within the Sasembata District

628 As soon as we move beyond the closely allied villages, there is a sharp distinction between the behaviour appropriate with kinsmen or regular partners and friends resident in those villages, and the far more cautious and formal behaviour appropriate when dealing with all others. There are far fewer transactions between Sivepe and Isoge or Kendata than with Garombi or Kongohambo, and other close villages. But I believe that the frequency of such contacts fluctuates according to contingencies. For instance, Isoge and Sivepe are now expected to cooperate in both church and local government council activities. This is definitely a somewhat [178] novel experience. One clear example can be given of the changes in attitude this has produced over the last 16 years.

When the Sasembata mission station was built in 1952-1953, 797 all the villages contained in the parish collaborated. Miss White's 794 diaries show how this cooperation was organised. Miss White, who 629 was in charge of the station, arranged with leaders from each of the villages what tasks they would be responsible for. For instance, the nearby Sasembata village would build the teacher's house, Garombi and Isoge would finish the hospital ward, Sivepe and Binduta would pull down the old pre-eruption Standard 1-3 classroom building, Duve and Totogota would finish the standard 4 building, Kongohambo build another schoolroom while Hamburata would cut and saw the wood for the desks. (28 December, 1952) Evidently, each group would work one day a week--and each group on a different day, as I understand.

653 The hospital building was duly finished in bush materials and in 1966, while I was in the field, the time had come to pull 628 it down and renew it. The Australian teacher in charge of the [759] station was unable to organise this work. There was, however, a Papuan medical assistant in charge of the hospital who was efficient and popular. On the occasion he treated the sore leg of a Sasembata man who was a carpenter. The man offered to build the assistant a "house," i.e., a hospital. He collected 20 men from Isoge, Garombi, Sivepe, Binduta, Hamburata and his own village. Together they built the hospital in a few weeks, working together every day. Often there were more than 20. When it was finished, he did not think it was strong enough. It was pulled down and rebuilt with more substantial studs.

The main difference between the building programmes of 1952 and 1966 lies in the manner in which the work was organised. In 1952, the largest effective cooperating group was the village. The mission was able to draw on the services of several villages, but only if they worked separately. In 1966, an Orokaiva builder, drawn from one village, was able to control and lead the work of a group recruited from all the villages of the Northwestern half of the parish acting as a coordinated team.

628 guests, it appears that they were friendly but rather formal. As
574 will be shown later, all arrangements in connection with Ilimo
731 camp were made between the government and the Ilimo people; the
Orokaiva had no forms of organisation, in 1951, through which the
[651] refugees could have negotiated directly with Ilimo. The hosts generously supplied food, grew extra food in special plots, provided abundant building material from their land, and a site for the camp and helped with the preparation of the camp while the evacuees still lived at Wairope, in return for which the government made various gifts which Ilimo evidently regarded as adequate payment. At no point, during the existence of the camp, did the refugees develop an organisation which dealt directly with the Ilimo people. Thus, the only contact between hosts and guests was on a social level.

The camp was built at some little distance from the village. Refugees who had friends and relations in Ilimo used to go over to the village and visit them. There was for instance, at the time of the eruption, one Sivepe man resident at Ilimo; thus some Sivepe people paid visits to the village. There was an Easter celebration at the camp to which the village people came. When the camp broke up, the government gave a feast to the Ilimo people, on behalf of the evacuees, in the usual Orokaiva style.

121 If we wish to answer the question to what extent contact between different "tribal" groups (or distant groups) of Orokaiva has become more intensive since the eruption, we cannot confine ourselves to contacts occurring in villages such as Sivepe or Ilimo. Here the pattern suggested in the previous pages has hardly
● [176] changed. The changes have occurred by the development of new organisations (to which I shall refer later) through labour migration and through urban development.

As I am at present discussing only unorganised contacts
464 between villagers, I can give only one clear instance of changing
166 attitudes and this is in Popondetta itself. Popondetta, the new
633 administrative centre of the Northern District, has about 4,000 inhabitants, almost all Orokaiva; among its inhabitants all parts
[162] of the Northern District are represented, including Sivepe. The Sivepe people had many relatives there, mostly hailing from the Sasembata district, and employed in some regular job in the town. These jobs are partly in personal service to Europeans, but also in light industry, the retail trade, public works and public service, and go far beyond the little employment that was available in pre-eruption Higaturu (with a population which, judging from aerial photographs, can hardly have exceeded that of a large village).
484 Popondetta is preeminently the place where intelligent men from
521 various villages can gather informally to discuss political and other public questions, and develop a wider interpretation of the situation
633 of the Orokaiva which is learnt by the men from the villages when they pay occasional visits to Popondetta. The town generates a new

177 fraternised with them. In fact, the friendly atmosphere created by
829 both the American and Australian troops during the war gave the Orokaiva
769 a different view of Europeans than they had before and must have greatly assisted the acceptance of the economic development ideology and local government council movement in the 1950's and 1960's. A
[415] great proportion of the cooking pots, adzes and other steel tools found in the villages today were gifts from the Americans.

769 In all the villages I visited, people listened to the news
829 broadcasts in Motu and Pidgin English; hence they heard about the Vietnam war and we discussed it a few times. The reaction was strange:
[207] it was a great pity that those American boys were being killed in
[191] Vietnam, because they were wonderful people. There was distinct disappointment that the Americans had decided to go to Vietnam instead of returning to Papua-New Guinea. Some jealousy was felt towards the Vietnamese who had now been thus favoured. I tried to assuage the disappointment felt by my informants by summarising some facts from the Manchester Guardian Weekly, my only source of knowledge at the time, but I could see that the convictions of the Orokaiva on this point were unshakable; they knew some things about the Americans which I was (or pretended to be) ignorant of.

Section 10: Self-Group Image

829 The self-group image of the Orokaiva has undergone a profound
[178] change since the war. The question that we need to investigate here is the extent to which the eruption experience affected this long-term change. The most useful procedure will therefore be, as in Section 8,
121 to set out first the present self-group image and its general development
128 over the last few decades; secondly, to place the data we have on the period immediately following the disaster in the framework of this general development.

829 Like other peoples I have personally studied (the New Zealand Maori and the Canadian Indian), the Orokaiva have been the recipients of a barrage of propaganda on the part of missionaries and government officials, who were critical of Orokaiva material standards, social customs and religious beliefs. They also supplied severe sanctions against those who did not change their material standards and customs while considerable inducements were held out to those who would. The Maori and the Blood Indians, while complying on the whole with the demands of the whites, at the same time retained a strong belief in the greatness and, often also, the superiority of their old customs. I was therefore surprised that the Orokaiva had nothing good to say about their own past, representing it as a nightmare from which they were glad to have escaped, while the teachings of the Europeans as well as their goods, provided an opportunity--the only known opportunity--for vast improvement.

CHAPTER IX: Adherance to Tradition

Section 1: Conflicts Between Two Conceptual Systems

The Orokaiva of today has to act in conformity with two conceptual systems, one attributed to the ancestors and the other imposed by the mission and, to some extent, by the government. Essentially the system followed today is that attributed to the ancestors, but changes have been very numerous. These changes have mostly been conceptualised as substitutions and additions of the old system, leaving its essentials intact. At the same time, these substitutions have been calculated to ward off criticism from mission and government, and to cope with changed conditions.

There is, for instance, a taboo on using the names of affines. When the government pressed for the amalgamation of villages, affines frequently found themselves residents of the same village, which made the name taboo very awkward. The custom now is that the taboo is greatly relaxed for Christians; the baptismal name has only a mild taboo attached to it, while the severe taboo on the Orokaiva name bestowed at birth has remained unchanged. In dealings with Europeans, who do not respect the taboo (even though affines of a person are present), only the baptismal name is used. In the village, the Orokaiva names are now heard very rarely indeed.

The temporary labour migration of young men (who sometimes leave wives behind in the village) continues a traditional pattern of behaviour as young men used to go out in the same circumstances to hunt heads, but it is money they now bring back before they settle down. Bridewealth gifts have remained conceptually as they were before: there must be a pig or pigs, bark cloth, ritual valuables such as shell necklaces and feathers, cooking pots, but in addition new wealth is necessary: store clothes, "knives and forks" (i.e., kitchenware) and money. Here again, a change in detail has not changed the basic conception of the gift but rather has updated the details.

There used to be a ceremony to which a boy was subjected at or just before adolescence. This was the time when the boy formally assumed clothing. The boy used to be given his perineal band (bo) by some adult male cognate, often the man by whom the boy had been named. (Williams, 1930: 98) Nowadays, boys wear clothing much earlier in life, but the ceremony is still held as an occasion for honouring the child. It is now called a "birthday party"; as such it has the blessing of the mission while at the same time an essential part of a boy's life cycle is preserved.

796 The same pattern is found in the dancing which occurs nightly
177 before a major feast is held or before certain initiatory rites (like
the kere) are concluded. These are now referred to as "practise,"
[535] even though they are undoubtedly ritual acts in their own right. It
is also significant that the Orokaiva seasonal rites have been fitted
in as part of the Christmas and Easter observances, apparently as an
exotic appanedage, but in fact as a means of preserving traditional
religious obligations, even though in a changed form.

659 The same service of two masters is sometimes seen in the secular
sphere. People built lavatories, on official instructions, long before
[514] they dared to use them (for fear of sorcery). At Kendata, an hour's
754 walk from Sivepa, I saw a village with new houses, built on the govern-
ment's instructions, but I was told nobody lived there except when
[361] there was a visit from the patrol officer. There are many such villages
in the Managalasi district. Here, government instructions are being
complied with but customary patterns have persisted. In Sivepa, not
very much show needed to be put on for the patrol officer. The place
was cleaned before he arrived, of course, but not significantly more
so than happened every week.

123 It is true that certain things were concealed from me in Sivepa,
but these fell largely into some simple and reasonable categories:
secrets known only to initiated men, secrets known only to members
of a family or of the Seho clan. It was not a practise of the people
to pretend to adhere to a custom they had abandoned or to pretend to
881 have abandoned what they were still practising. In the early days of
our stay, this did happen; it took some months before we discovered
that girls were secluded upon their first menstruation and then ceremoni-
ally exhibited. We were told this custom no longer existed. But then,
we had referred to the custom with reference to what Williams said
about it; and in that form, perhaps, it was not or no longer practised
[841] in Sivepa. Later, I was told that if the ceremony was not performed
[783] girls could not control their menses; there would be no way of stemming
the flow of blood and everything would be polluted. Thus, the ritual
has persisted. Whether full-grown girls, completely naked, are carried
through villages at the present time I very much doubt (vis Williams,
1930: 207). I was told that these customs lasted until the second
534 world war and then were abandoned. But I found the word "abandoned"
782 always a dangerous one; the calling down of spirits with bullroarers
in preparation for a feast (viz. Williams) was also, according to
178 Sivepe informants, an "abandoned" custom; yet it happened in both
Inonda and Urarituru (a mile from Sasembata mission station) in 1967.
It was true that it had not been done in Sivepa for some time--not
since the middle fifties--and that there was no immediate intention
of doing it again. On the other hand, Sivepa knew the use of bull-
roarers as a means of calling down spirits which would then be
present at a feast and give this feast magical potency. For the time
being, Sivepa people evidently feel that this procedure is unnecessary
for the achievement of their immediate ends but it is still part of the
store of available possibilities should a need appear to arise.

astonishment about this kind of story, I was told in explanation that at the time of the eruption, the old people could not run away and the old people all died. For this reason, old customs and old knowledge died also; those who were left behind--the children who could run fast enough to escape--were forced to accept the new way of life as they knew no other.

This suggestion of an abrupt break in cultural tradition is of course in itself mythology. The continuity was obvious enough to the observer. Nonetheless, the belief in discontinuity was an important aspect of the modern Sangara self-group image. In the eruption, Sangara lost the people who used to make the decisions, who used to set patterns of behaviour. The survivors were forced to put the pieces together as best they could. Many customs vanished on the day of the eruption, e.g., polygyny; those customs which survive in Sivepe, however, mostly survived to some extent in Hohorita too. But when I asked my Hohorita informants whether father-in-law still chased his son-in-law with a firebrand this definitely appeared to be out of fashion. For traditional knowledge as well as custom, Sivepe was the repository of much that Hohorita had left behind. Almost all the mythology had been lost; the dancing was much inferior because the people were so much busier with their coffee; on the other hand, feasting ceremonial had remained mostly intact. Burial rites were no longer as Williams described them but very much the same as in Sivepe, i.e., the essentials were intact but a great deal of restraint had been introduced, the body was no longer dressed and laid out in the traditional manner and, most important of all, the widow was no longer expected to stay with the dead man after burial.

In matters of food, clothing, housing and village improvement, tools and skills I found most of the same features as in Sivepe. The differences I found were, to some extent, in the greater availability of money, in the larger number of educated people, the larger number of persons who had migrated to towns where they held skilled jobs, the intensive contact between this educated élite outside the village and the educated élite inside it, and as a result, as far greater awareness of ideological and political issues than could be found in Sivepe. Stephen, the government driver at Inonda, had a sophistication comparable to this educated group at Hohorita, but he was alone and exchanged ideas only when he was in Popondetta, away from the village where wider political and ideological ideas would have aroused little interest.

Section 4: Leadership in Hohorita

At the time of my arrival at Hohorita, the traditional leader, a man called Amos, had recently died. After his death, he was revered with much ceremony. Thus, during my stay, a naterari (Williams: 1930: 226) was set up, i.e., a post to taboo the coconuts and betelnuts

22: Schwimmer E-4,5 (1966-1967) 1969 QJ23 Orokaiva QJ23 Mount Lamington

TABLE 10

CHANGES IN HOUSE DESIGN,
HOUSE CONSTRUCTION AND
DOMESTIC AMENITIES IN SIVEPE, 1936-1966
(Comparison between standards reportedly applied
on four successive village sites)

Elements	1. Pusahambo (pre-war)	2. Pamba (between war and eruption)	3. Old Sivepe (after eruption, until 1965)	4. New Sivepe (1966)
Floor level	Raised on posts	Raised on posts	Raised on posts	Raised on posts
Flooring material	Betelnut, wide gaps	Betelnut: no gaps	Some betelnut, some blackpalm	Some betelnut, some blackpalm
Windows	No windows	No windows	Small windows	Large windows
No. of rooms	Three	Three	Three	Three
Walling material	Split sago	Split sago	Split sago	"Timber"
Nails: framing	Nil	Younger people	General	General
Nails: walls	Nil	Nil	Nil	General
Shrubs	Beside houses	Beside houses	Beside houses	To mark paths
Betelnut	Planted	Planted	Planted	Planted
Coconut	Few	More	More	More
Waste disposal	In gully	In gully	In gully	Rubbish holes
Pigs	Present	Present	Present	Absent
Hen houses	Absent	Absent	Absent	Pens built
Lavatories	Absent	Absent	A few	General
Floor area	"Very small"	"Bigger"	"Much bigger again" (200 sq. ft.)	"Big" (375 sq. ft.)

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351
364
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or even force Orokaiva settlement patterns from the traditional scattered hamlet system to village or even town living. Another tough question was how far Government should step in to supervise matters of economic and social welfare, including elementary schooling which hitherto policy had left almost wholly to the Anglican Mission. The majority of the mountain Orokaiva are now adherents of this Mission, the only body operating in the area. Questions relating to land tenure, social group realignment, leadership, law and order, and other matters involving local custom had also to be faced, especially in the course of the first experiments in resettlement.[4]

Officials and Mission workers reported that the explanations of the "cause" of the disaster given to them by Orokaiva, were, in general, of a supernatural nature: "God" was punishing them for "sins" such as "not supporting Mission and Government plans for development," "not building new churches as requested by the Bishop," or "not helping the Allies enough during the war." However much these may have pleased the hearers, the fact seems to be that there were resulting strong feelings of insecurity and even of guilt in their retrospective look at the pre-eruption way of life.[5] Officials who know the Orokaiva considered that these feelings undoubtedly helped to foster the extraordinary degree of cooperation and orderliness in situations where large numbers of people were necessarily herded together and shifted around without benefit of the traditional niceties and proprieties.

This raises the whole problem of interpreting the overt events here summarized in terms of their cultural and individual contexts. In discussing theory relating to the dynamics of change and resistance to change, the writer, along with others, has referred elsewhere to the general tendency for peoples to be pre-conditioned by the characteristic sets of their culture and personality norms, to be differentially "adaptable" or responsive to change in the face of new experiences.[6] The impression gained in this case is that subject to inevitable factors of shock and disorganization, the Orokaiva were culturally predisposed to respond to the traumatic experience here described with something approaching maximum adaptability.

The mountain Orokaiva are shifting cultivators, and supplement their staple food, taro, with sweet potato, yam, banana and sugar cane. Flesh from domestic pigs, chickens, dogs, and wild game is what Williams calls "a dainty rather than a diet." "Fresh ground," says this ethnographer, "is continually cleared for new plantings" in the typical pattern

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4. These matters are discussed particularly by C. S. Belshaw, an anthropologist working in Papua under the auspices of the Australian National University Research School of Pacific Studies, as a result of a visit to the area in April, 1951; see his "Social Consequences of the Mount Lamington Eruption," *Oceania*, 21, 4, pp. 241-252 (1951). This article was not seen until after the first draft of this paper was completed, and as the approach is considerably different the two papers are complementary rather than unduly overlapping.

5. Belshaw, *op. cit.*, p. 242, stresses this "guilt" factor.

6. F. J. Keesing, "Some Notes on Acculturation Study," Sixth Pacific Science Congress, *Proceedings*, IV, pp. 59-63 (Berkeley, 1940); "Cultural Dynamics and Administration," Seventh Pacific Science Congress, *Proceedings*, 14 pp., mimeographed (New Zealand, 1949).

241 of "dry" gardening, with fire and the digging stick as the essential tools, and either long term rotation of previously occupied areas or breaking in of new forest land. "The immediate family . . . is a self sufficient unit" and "the Orokaiva words for 'work' and 'garden' are one and the same." Con-
62 sistent with this mobile economic base, settlements are rarely more than hamlet size, with "hardly more than a dozen houses" on the average. Materials for housing are readily available, so that residence can be easily shifted.

The hamlet is based normally on patrilocal-patrilineal principles of organization, with a known strong tendency for new groups to form by "hiving off." Clan affiliations are
(614) reckoned from quite recent ancestors, so that at times a given clan may all be in one settlement, though more usually scattered through several closely related settlements. The
592 generally monogamous family units are under the "immediate
42 authority of the father," while the affairs of the local living
622 units are under loose supervision by the hamlet and clan elders, centered on a "men's house" and working together,
422 usually with one strong senior man as "leader." Personal property consists of mobile goods such as tools and utensils, clothing, and body ornaments.

181 In spite of ethnic similarities over a wide region, Williams speaks of the Orokaiva as being a "more than usually quarrelsome and disunited people"—a strong statement to make in the New Guinea setting. Their pre-pacification history was marked by "feuds, dispersals . . . a veritable whirlpool of strife, migration, and counter-migration." Beaver, too, refers to their "turbulent and restless life . . . migration was, in
[154] the main, a matter of attacking, fleeing, and pursuing." Supernatural weapons in the form of sorcery were especially feared. Even for Papuans, the Orokaiva proved to be unusually
[562] hostile and resistant to whites. Women were often seen ac-
[726] companying the war parties, carrying food and weapons, and sometimes joining in fights. Williams goes on to say that
[628] while the "elementary small sympathy-groups" (the local kin and settlement units, and to a lesser extent the dispersed clan units) were tightly knit, their external relations were
[728] precarious. "There were peacemakings or truces, but the truce was always a fragile one, and no (settlement) lived in permanent security." "Hiving off" occurred sometimes
361 as the result of a "quarrel and the fear of retaliatory magic,";
241 but more often it was "simply the lax method of horticulture
[518] which necessitates the clearing of many areas in succession and sometimes a temporary settlement on a distant site.".
361 Another factor could have been food scarcities which tend to occur in exceptionally dry southeast winter seasons. During
261 this period, north and west Lamington area is in a rainshadow zone, and people may have to scatter out to live on wild
731 roots and fruits. The implication of this is that even the
165 excision of the 4,000 persons from the Orokaiva group who were killed involved no extensive shattering of valued ties.

361 Williams and others judge that with the modern pacifica-
178 tion, the Orokaiva have tended to disperse in even smaller living units than before. This appears to apply particularly
[749] to the relatively densely populated Lamington slopes, though a few instances of larger aggregations approaching a village
361 type also occurred, particularly as a result of Mission influ-
571 ence. Over against this greater dispersal, the people have;

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problem—and one which the Orokaiva will not be equipped to solve when stocks of these animals are eventually restored. It seems fair to prophesy that as the people become habituated to living in the shadow of the volcano, many of them will quietly "hive off" from the present concentrations and go their familiar economic way. Alternatively, official opposition to this trend could produce growing tensions, including anti-Government hostility.

5. Other factors can be noted congruent with the above points. Some individuals are said to fear that in larger communities they will face more extensive demands for village maintenance and other Government and Mission needs than under the old patterns of settlement. Belshaw points to a complication of the labor situation in the resettlement areas due to a request by the Mission that its adherents devote some time to building new Mission stations in the area. As indices of the increasing normality of life, there is some revival of dancing and music, as well as keen sports interest.

On the basis of such factors, the writer ventured to present to the Administrator and a group of his top officials a view opposed to a compulsive concentration policy. He suggested, instead, that three or four main "centers of attraction" be developed outside the danger zone and on the main road, corresponding to the principal ethnic concentrations (Sangara, Isivita, Wasida). Here would be located subdistrict offices, Government boarding schools, medical aid posts, community center houses, experimental garden plots, and other facilities. Housing space could be made available to those desiring to settle around such a center voluntarily and try out more concentrated and sedentary living. The Mission could also use such centers for their stations if it wished. The writer also recommended cutting a series of crossroads more or less at right angles to the main road, and locating each "center of attraction" at a main crossroad point. These secondary roads would serve to draw settlement away from the overcrowded chain of villages that have developed along the one main road. This plan would enable those people who do not wish to be concentrated to scatter out in a wider pattern of dispersal for garden development; it would offer quick routes of escape on foot or in vehicles in case of the threat of further eruptions, ready access for government welfare services, and for transporting commercial crops to market. The writer has subsequently been informed that these proposals in general correspond with the policy which was officially adopted—crossroads have been cut and government centers and facilities have been built up at three key points.

The second problem referred to earlier, namely the delicate one of Government versus Mission responsibilities, will be discussed only briefly. The Mission teachers claim that the great majority of the mountain Orokaiva are adherents: those remaining outside the church do so by conscious choice. In the wake of the eruption the Anglican authorities sent in a very active, young Bishop who was familiar with the people, to take charge in place of the resident white staff killed at Sangara. Mission medical workers took over some of the important health responsibilities, including a Mission hospital at Oro Bay. "Native" Papuan Mission teachers started elementary vernacular schooling in the camps.

241 the Territory to the point of self-sufficiency and dietary ade-
177 quacy and one on which almost no progress has been made. Theoretically the problem does not look difficult, in view of the characteristic adaptability of the Orokaiva, the loose group organization which involves no elaborately structured hierarchy of vested interests in the *status quo*, and the freedom of families to experiment as they wish as more or less independent production units. But here, as in the case of shifting gardeners in many comparable situations, the problem is one of motivation, of incentives. Among the Orokaiva, for all the enthusiasm they have engendered, past religious and cooperative movements have not struck seriously at the rotational basis of cropping, or introduced fertilization and other soil-maintenance techniques. The territorial De-
[654] partment of Agriculture is desperately short of manpower and it is not likely that it can afford to station a permanent cadre of technical personnel to guide and supervise this
[799] still quite remote district. It is also very doubtful that the Anglican mission could do so. Nevertheless, at the centers referred to above, the present dynamic situation justifies giving encouragement and aid on a voluntary basis to any families and individuals who may wish to try out sedentary cultivation, market saleable products, and on a cooperative basis of organization where desired. Such a non-compulsive widening of the range of cultural alternatives seems in line with a current strong stirring of ambition among some of the younger, schooled Papuans to adapt to the modern world and have a greater voice in the affairs of the Territory.

731 To the extent that this paper presents a correct interpreta-
177 tion, its implication is that this catastrophic shock has pro-
178 duced something approximating a minimum degree of cul-
121 tural trauma, considering the demographic dimensions and the destruction and death involved. Predispositions in Orokaiva culture and personality favored relatively easy "adaptive" behavior in the face of crisis. The remarkably effective
[659] relief measures taken by the Australian authorities helped materially to cushion the situation. Any attempt by Government and Mission to use the emergency to manipulate such a people and culture arbitrarily in drastically new economic and socio-political directions would seem foredoomed to failure, and would generate unwanted tensions. Yet opportunities are clearly present for economic and other stimula-
121 tion and education of a voluntary and permissive type. Considered as a case study in cultural dynamics it is illustrative both of internal readjustment in a culture where a sharp shock and break in continuity occurs, and of the implications of attempted control and direction in culture process by a dominant outside authority.

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gara lived close to a large mission station which offered educational facilities until it was wiped out by the disaster. Afterward, the mission took a special interest in their welfare.

What distinguished the relocated villages from the others was not greater contact with European-dominated institutions. On the contrary, it would seem that contact with such institutions was probably most frequent among the male residents of Inonda, who were much engaged in wage labor; such contact was least frequent in Sivepe, with Hohorita holding an intermediate position. Nor could it be said that economic prosperity, in the sense of money income, was correlated with relocation. On the contrary, the average income was higher in Inonda than in Sivepe or Hohorita.

In summary, the major outcomes of the eruption and relocation have been the following: first, the administrative center Higaturu, situated on the mountain, was destroyed and replaced by Popondetta, which lies on the alluvial plain to the north, thus shifting the center of Australian influence away from the relocated villages. This detracted from rather than contributed to development of the relocation areas and placed the administrative center at some distance from the areas of greatest population density. However, the relocated villages were provided with subsidiary centers of Australian influence such as the hospital in Saiho and the mission stations at Sasembata, Isivita, Agenahambo, and Hohorita. In addition, a number of large villages (with populations of 250 to 500) came into being along the main road between Popondetta and Kokoda at a distance of 6 miles or more from the crater; these villages were made up of groups previously domiciled in small bush villages.

The government prefers these large villages because they make it possible to introduce such Western social institutions as schooling, water supplies, road construction, and health clinics more conveniently. The eruption offered the government a good opportunity to establish large villages. The population of the bush settlement had abandoned the area, and by the time the population was allowed to return, the villages were no longer habitable because of eruption damage and subsequent neglect. In this sense the eruption offered an opportunity for speeding up development programs. One might also argue that social development among the Sangara survivors was accelerated when the entire older genera-

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tion perished in the eruption and the survivors were therefore not fully instructed in traditional religious knowledge. Innovation proceeded without the resistance an older generation might have offered had it survived. I have argued elsewhere that this absence of the elders led to striking changes in the Sangara perception of the world (Schwimmer 1969:70–71).

If we compare relocated villages such as Hohorita and Sivepe with villages touched less by the disaster, such as Inonda on the alluvial plains, we notice that the former villages are larger, display more of the innovations advocated by the government, have a higher level of school education, and have responded more to government-sponsored schemes such as coffee growing. In my detailed report (Schwimmer 1969), I was inclined to ascribe such differences to the effect of close contact and guidance during the period immediately following the eruption, but such an explanation should be treated with caution.

The differences are probably due largely to ecological factors described in the report. Inonda land provides more animal foods; it is slightly closer to wage employment and markets; the climate is less suitable for cash crops than in Sivepe. The population, due to its sparseness, is relatively deficient in health and educational services. Hence the conditions for cooperation with government programs were less favorable than at Sivepe. Furthermore, the observed differences may also be due to historical factors. While coastal and foothill areas had been missionized and in contact with the administration for many years, the intervening Sauaha groups including Inonda were defeated and sustained heavy losses in the warfare of the early postcontact period. They subsequently remained aloof from white contacts. After the Japanese occupation, some of their men were hanged by the Australians for having acted as collaborators.[11] Hostile feelings are still an impediment to the acceptance of government and mission programs.

Such social consequences of the Mount Lamington eruption do not in themselves lead readily to illuminating anthropological generalizations. The actions of government and mission immediately after the eruption greatly relieved the distress of the population, but we cannot establish that these actions, directly and specifically, led to major social changes. One might therefore be inclined to view the eruption of Mount Lamington as lacking serious anthropological interest, yet such a view would greatly

never occurred. The vast increase in the number of baptisms indicates a significant development in the pattern of transactions in the exchange relations with the new god.

The effect should not, however, be overestimated, as the environment and the socioeconomic situation did not change significantly immediately after the eruption. No socioeconomic transformation occurred because of the eruption or the belief that the eruption itself was divine retribution for noncooperation with the government. On the other hand, significant social, political, and economic changes did happen within ten years or so of the eruption; and when these changes occurred, they were interpreted in a manner consistent with the Christian explanation of the eruption.

Let us now consider the relationship between the various explanations on the religiophilosophical level. Perhaps the best starting point for our analysis is our apperception that the three religious explanations have to do with political strategies—that is, with the maximization of power. It may be enlightening to look at these strategies in terms of the Orokaiva's own general ideas about power. The Orokaiva word for 'power' is *ivo*, a mana-like concept envisaging 'power' as derived from spirits and bringing success in difficult ventures by overcoming misfortune, obstacles, and enemies. Misfortunes are explained by 'power' coming from a hostile source—for instance, from one's human or spirit exchange partner during a cycle of negative reciprocity.

The first of these three explanations postulates the existence of a negative exchange cycle with Sumbiripa, so that the people's 'power' depends on placating Sumbiripa and avoiding his anger in the future. The second explanation postulates that, in fact, the disaster was a restoration of the 'power' of the Papuans, as it punished Europeans who hanged Orokaiva ambushers. The third explanation, however, raises some difficulties. The restoration of 'power' here seems to depend on obedience which must be shown to the mission and the government.

This question of obedience is perhaps more one of degree than of essence. Students of religion (such as van der Leeuw 1938) distinguish between relations of "manipulation" and "obedience" which may exist between man and the gods. In this sense the relations with Orokaiva deities, including Sumbiripa, would tend to be manipulative. On the other hand, the relationship with the Christian deity involves far greater and far more diffuse demands,

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dependence on the exchange system for the creation of larger solidarity networks. In a culture where warfare was endemic, these larger networks were indispensable in order for the traditional land tenure system, with its emphasis on multiple rights, to be socially adaptive under precontact conditions.

The 'new age' ideology, as expounded in 1966–1967, does not ignore these basic conflicts but incorporates them in the notion that multiple ownership belongs to the 'past age' whereas sole tenure is the modern ideal. There is strong support today for administration moves to establish a system of sole titles and to abolish the institution of multiple rights. Cash cropping has emphasized the need for such a change. In practice most Orokaiva today plant cash crops on patrimony land rather than on land on which there are invocable claims of residual rights.[18]

The movement toward individual landholding did not start in the Northern District until the mid-1950s, when there was a government-inspired attempt to have landholding titles issued by the Higaturu Local Government Council (see Crocombe and Hogbin 1963). I am not aware of any organized attempt to reform the system of Orokaiva land titles at or before the time of the eruption of Mount Lamington. If such reform is being introduced into the 'new age' ideology today, this must be credited to indoctrination mediated through members of the local government council.

We have seen that, at Ilimo, the traditional land tenure system was the basic cause of a conflict which strongly affected the course of the administration's resettlement policy. The officer in charge of the camp perceived two main purposes: to keep the people safe from the volcano and to rehabilitate them afterward in villages which would have a more modern life-style. As we have seen, the Orokaiva accepted both these objectives as desirable and benevolent. On the other hand, there was a difference in the importance that Orokaiva and administration attached to an early return to the home villages. The administration might have preferred a longer period of evacuation for the sake of safety from the volcano and also for the sake of its program of community education. They met, however, with a restlessness which made them hasten the disbanding of the camp. The same restlessness induced the Orokaiva to agree quickly to some programs of resettlement, not because these programs appealed to them very much but because agreement would hasten their return to the land. European

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quences of disobedience are stressed by the ideology—such an attitude is viewed by Orokaiva not as part of a permanent new order but as a temporary expedient, a ploy in the power struggle.

Reform is advocated in terms of such strategy. Over the last fifteen years we have seen that the Orokaiva have begun to accept the idea of converting land titles to sole tenure, as well as the inevitable consequences of such conversion for kinship organization. Such changes are explained in ideological terms as a necessary part of the competitive struggle against Europeans. The fact that Europeans view the same move as serving the cause of social and economic development is almost a coincidence.

Perhaps the most important practical conclusion we can draw about the genesis of cognitive structures has to do with the nature of power competition between Orokaiva and the administration. It is often supposed that development and political competition are separate processes in conflict with one another. The case in question shows that the Orokaiva view both aspects as part of an ongoing exchange relationship. It will have been noticed that in political debate Papuans, especially those in the villages, are reluctant to seek immediate political independence from Australia, even though tensions clearly exist. The point here is that they like to see the exchange relationships with their Australian partners continue, even though they wish to improve greatly their own position in that relationship. It may be, of course, that this attitude will change later. In the exchange relationship their own very considerable prestation is their subordination to foreign authority. In return they are receiving educational benefits which they value highly—not, fundamentally, because these benefits increase their private incomes but rather because they maximize Orokaiva power in the exchange relationship.

In addition, the material presented here may have theoretical implications with regard to the genesis and dynamics of cognitive structures. We must distinguish here between macro- and micro-processes. For the purpose of the discussion, I have assumed that the Orokaiva world view, with its notions of exchange and power, remained unchanged between 1951 and 1966. This assumption was convenient for the analysis, but it must be qualified. In 1966 I was given geophysical explanations of the eruption as well as magico-religious ones, and the former (though feebly held by a small elite) do prefigure a basic structural change in the Orokaiva

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cognitive system. For the most part, however, I was concerned with microprocesses, such as the simultaneous development of explanatory systems based respectively on a tribal, Cargo Cult, and church-administration ideology. None of these ideologies was generated by the eruption, but the eruption was treated as a sign within the context of each of these ideologies, with a different interpretation in each case.

The eruption became a sign because it took its place in a series of ongoing transactions with supernatural beings. As such it had the effect of changing the relationships with these beings in regard to both duties and expectations. The eruption differed from other such signs mainly by its cataclysmic character and its unequivocal demonstration of power. The fact that different interpretations evolved is not an accident but mirrors an ongoing debate within the society. The evidence suggests that cognitive structures do not change by a process of unilineal development but by a process of internal differentiation opening up a dialectic between ideologies opposed to one another along the axes of basic social conflicts. In the Orokaiva case these axes were tribalism/regionalism and denial/acceptance of the partnership with European power. If opposition exists along these two axes, four systems are theoretically possible—namely, tribalism + denial, tribalism + acceptance, regionalism + denial, and regionalism + acceptance. As we have seen, each of these four combinations was found in actuality. The four Orokaiva theories thus form a well-structured whole, and together they express contemporary Orokaiva social reality. The structural changes that were taking place in the period 1951 to 1966 did not come out overtly in discourse but had been recognized and given meaning in terms of the ideologies in 1966.

NOTES

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1. In the Mount Lamington case, the institutional approach would produce results somewhat similar to Lessa's in his excellent paper "The Social Effects of Typhoon Ophelia (1960) on Ulithi" (1964). The major innovations over the last thirty years were due not to the eruption but to the Japanese invasion, the subsequent expulsion of the Japanese by Allied forces, the introduction of large-scale cash cropping, increased urban migration, and the development of officially supported indigenous political institutions.

   The exchange theory approach of Blau and Barth has been followed to some extent in the present essay, but as Garbett (170:225) remarks in the essay already referred to: "Unless one wants to treat situations as simply another kind of 'small group' in an extra-laboratory setting for the testing of propositions from exchange theory, one's findings have to be related to, and set in, a wider context presumably studied by other methods."
2. For semiological discussion on the Road Code, see Lévi-Strauss (1958:chap. 5) and Leach (1970:chap. 2).
3. As an illustration of connotative systems, Barthes (1964a) analyzes a full-color advertisement for grated cheese, spaghetti, and tomato paste and shows that the items in the picture are so displayed as to connote all the delights of a care-free life in sunny Italy where foods are sweet, fresh, unadulterated, and perfect in appearance.
4. The relationship between signifier and signified suggested here may not be peculiar to "the savage mind" but universal, as is suggested by Lacan (1966: 493–528).
5. One of the first useful studies of regional colonial macrosystems known to me in New Guinea ethnography is Burridge (1960), which indicates clearly the modalities of conflict and alliance in the Papuan–administration–missionary triangle. Extremely important also is Fredrik Barth's work on polyethnic systems (1969) and on forms of regional organization in New Guinea (1971).
6. The term "Pelean eruption" is applied to the type that occurred at Mount Pelée (St. Pierre, Martinique) in 1902. A large mass of ash is projected rapidly into the stratosphere to form an expanding mushroom-shaped cloud. The base of the column begins to expand rapidly as clouds of incandescent ash (the *nuée ardente*) avalanche down the slopes. The *nuée ardente* is lethal because of sudden damage to the respiratory system caused by inhaling hot (200°F) dust.
7. The reports written by these two scholars (Belshaw 1951; Keesing 1952) led to the inclusion of the case of the Mount Lamington Orokaiva in the project directed by H. G. Barnett and entitled "A Comparative Study of Cultural Change and Stability in Displaced Communities" (1961).
8. Here and throughout this essay I use the term "structure" in the sense of Lévi-Strauss (1958:chap. 15).
9. I have used British terminology in most of this essay as it seems hazardous to adopt American terms in a British-French conceptual framework. Where I use clan, American anthrolopologists would usually write "sib." The term "local clan group" refers to a coresident segment of a dispersed clan (or sib). A full discussion may be found in Schwimmer (1970a).

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1966–1967, however, this fear was not mentioned to me by informants, whereas I often heard of their worries about the danger that relatives from other villages might take their land, goods, and chattels.

18. On the average, an Orokaiva derives approximately half his land from patrilineal inheritance. In accordance with British terminology, I have called this "patrimony land." The other half comes from a variety of sources, mostly from uterine kin.

[pp. 342–400 not processed]